REVISION HISTORY BG2T CHASSIS

MODEL

KV-PG21N70
KV-PG21N70
KV-PG21P42
KV-PG21P42/G
(PEARL GREEN) (GREEN)
KV-PG21P42/L
(PEARL BLUE) (BLUE)
KV-PG21P42/N
(CHAMPANGE GOLD) (SILVER)

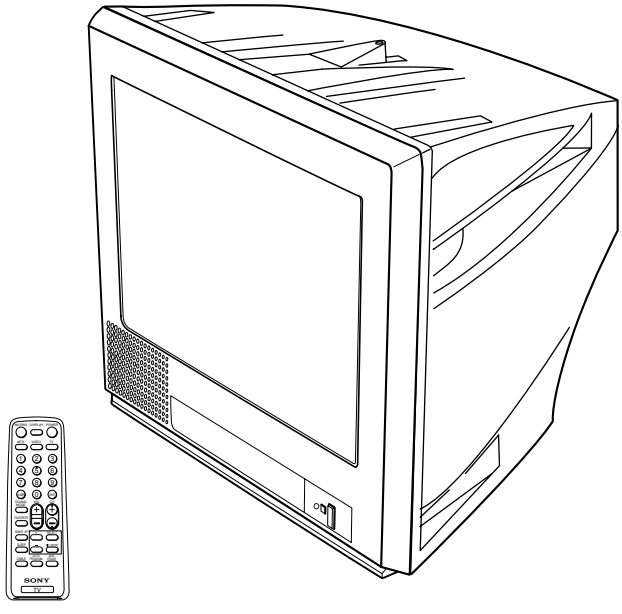
PART NO.: 9-872-272-01

NO	DATE	DESCRIPTION OF REVISION

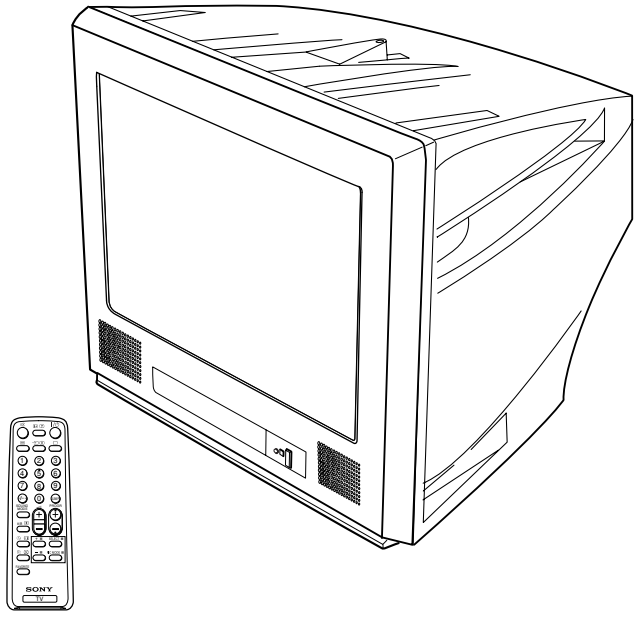
Self Diagnosis
Supported model

SERVICE MANUAL BG2T CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-PG21N70	RM-915	Philippines	SCC-U76A-A
KV-PG21N70	RM-915	Taiwan	SCC-U77A-A
KV-PG21P42	RM-952	Thailand	SCC-U73F-A
KV-PG21P42/G (PEARL GREEN)	RM-952 (GREEN)	Thailand	SCC-U73H-A
KV-PG21P42/L (PEARL BLUE)	RM-952 (BLUE)	Thailand	SCC-U73G-A
KV-PG21P42/N (CHAMPANGE GOLD)	RM-952 (SILVER)	Thailand	SCC-U73J-A



RM-915 KV-PG21N70 (TAIWAN/PHILIPPINES)



RM-952 KV-PG21P42/PG21P42/G/L/N

TRINITRON ® COLOR TV

SONY ®

SPECIFICATIONS

			Note
Power requirements	220-240 V AC, 50/60 Hz		
Power consumption (W)	Indicated on the rear of the TV		
Television system	B/G		PG21P42 (Thailand)
	M		PG21N70 (Taiwan)
Stereo/bilingual system	A2 Bilingual B/G		
Color system	PAL, PAL 60, NTSC3.58 (AV IN), NTSC4.43		PG21P42 (Thailand)
	PAL*, PAL 60*, NTSC3.58 , NTSC4.43*		PG21N70 (Philippines)
Channel coverage			
B/G	VHF: E2 to E12 UHF: E21 to E69 CATV: S01 to S03, S1 to S41		
	VHF: 2 to 13 UHF: 14 to 69 CATV: 1 to 125		PG21N70 (Philippines)
Antenna	75-ohm external terminal		
Audio output (Speaker)	3W		
Number of terminal			
Video	Input: 2* Output: 1	Phono jacks; 1 V_{P-P}, 75 ohms	* One input lines available
Audio	Input: 2* Output: 1	Phono jacks; 500 mVrms	* One input lines available
(Earphone)	Output: 1	Monaural minijack	except PG21N70
(Earphone)	Output: 1	Monaural minijack	PG21N70 (Philippines)
Picture tube	21 in.		
Tube size (cm)	54		Measured diagonally
Screen size (cm)	51		Measured diagonally
Dimension (w/h/d, mm)	497 x 458 x 487		
Mass (kg)	25		

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

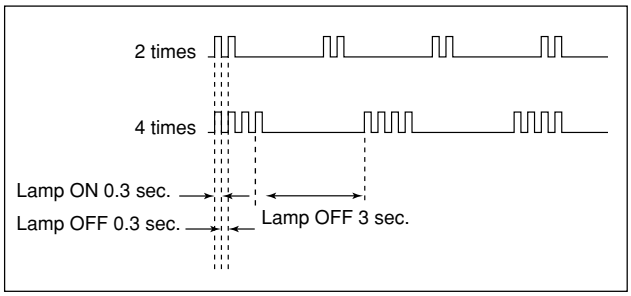
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F4601 (F)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP) • Horizontal deflection overdrive	2 times	002:000 or 002:001~255	• H.OUT Q801 is shorted. (A board)	• Power does not come on. • Load on power line is shorted. • Has entered standby state after horizontal raster. • Power line is shorted or power supply is stopped.
• White balance failure (no PICTURE) • Vertical deflection stopped	4 times	004:000 or 004:001~225	• -13V is not supplied. (A board) • IC 551 faulty (A board)	• Vertical deflection pulse is stopped
• Micro reset	—	101:00 or 101:001~225	• Discharge CRT (CV Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

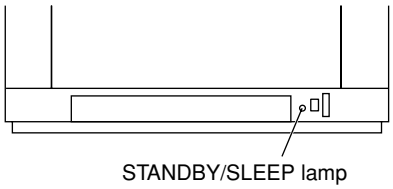
Note 1: If a + B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.
The symptom that is diagnosed first by the microcontroller is displayed on the screen.
Note 2: Refer to screen (G2) Adjustment in section 3-4 of this manual.

2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent/overvoltage	2 times
Vertical deflection stopped	4 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

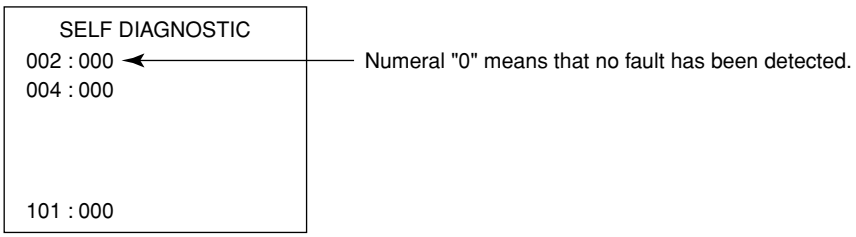
[To Bring Up Screen Test]
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

[Screen display] ➡ channel [5] ➡ Sound volume [-] ➡ Power ON

⇧

Note that this differs from entering the service mode (mode volume [+]).

Self-Diagnosis screen display



5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

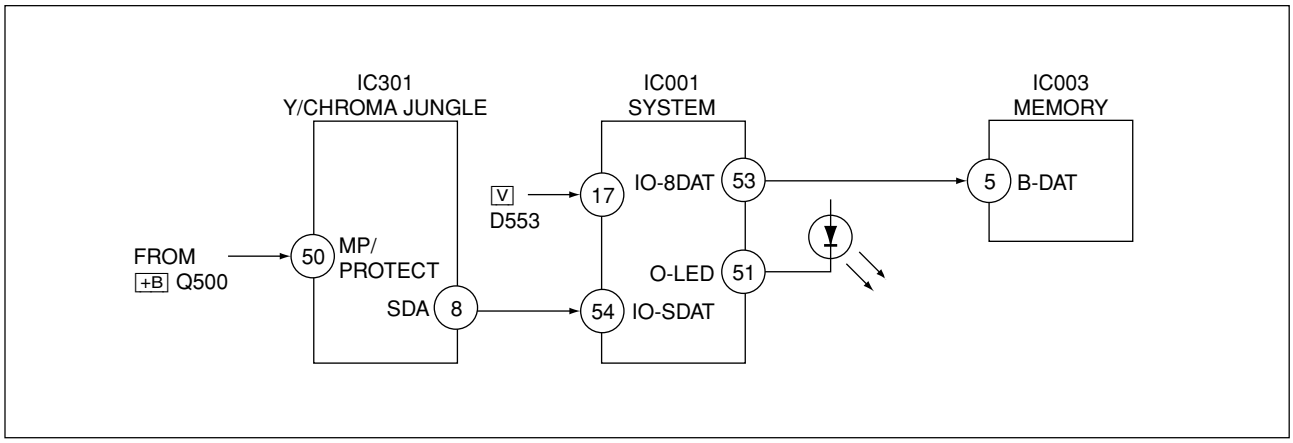
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]
To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT



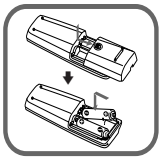
[+B overcurrent (OCP)]	Occurs when an overcurrent on the +B(135) line is detected by Q500. If Q500 go to ON and the voltage to pin 50 of IC301 more than 3.5V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.
[Vertical deflection stopped]	Occurs when an absence of the vertical deflection pulse is detected by Pin 17 and IC001 shut down the power supply.
[White balance failure]	If the RGB levels* do not balance or become low level within 5 seconds, this error will be detected by IC301. TV will stay on, but there will be no picture.

* (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1 GENERAL

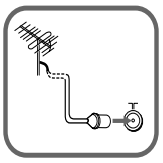
A Getting Started (KV-PG21N70 (TAIWAN))



Step 1

Insert the batteries (supplied) into the remote.

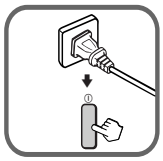
Note
- Do not use old batteries nor use different types of batteries together.



Step 2

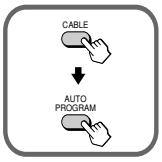
Connect the antenna cable (not supplied) to ⊤ (antenna input) at the rear of the TV.

Tip
- You can also connect your TV to other optional components. (See E)



Step 3

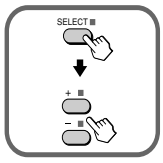
Plug in the power cord, then press ⏻ on the TV to turn it on.



Step 4

Press CABLE on the remote to select "CABLE: ON", then press AUTO PROGRAM on the remote to preset the channels automatically. (See J)

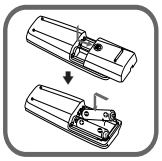
Tip
- To stop the automatic channel presetting, press SELECT.



Step 5

Press SELECT on the remote until "語文顯示 / LANGUAGE：中文" appears on the screen, then press + or – to change the on-screen display language.

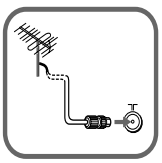
A Getting Started (KV-PG21P42/PG21P42/G/L/N)



Step 1

Insert the batteries (supplied) into the remote.

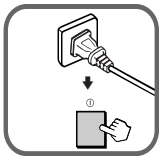
Note
- Do not use old batteries nor use different types of batteries together.



Step 2

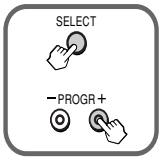
Connect the antenna cable (not supplied) to ⊤ at the rear of the TV.

Tip
- You can also connect your TV to other optional components. (See E)



Step 3

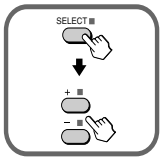
Plug in the power cord, then press ⏻ on the TV to turn it on.



Step 4

Press SELECT and PROGR + on the TV at the same time for one to two seconds to preset the channels automatically. (See J)

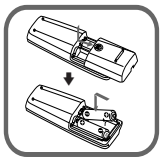
Tip
- To stop the automatic channel presetting, press SELECT.



Step 5

Press SELECT on the remote until "LANGUAGE/ภาษา: ENGLISH" appears on the screen, then press + or – to change the on-sceen display language.

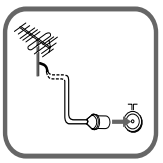
A Getting Started (KV-PG21N70 (PHILIPPINES))



Step 1

Insert the batteries (supplied) into the remote.

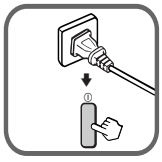
Note
- Do not use old batteries nor use different types of batteries together.



Step 2

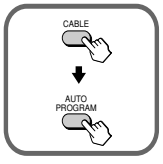
Connect the antenna cable (not supplied) to ⊤ (antenna input) at the rear of the TV.

Tip
- You can also connect your TV to other optional components. (See E)



Step 3

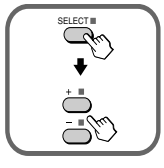
Plug in the power cord, then press ⏻ on the TV to turn it on.



Step 4

Press CABLE on the remote to select "CABLE: ON", then press AUTO PROGRAM on the remote to preset the channels automatically. (See J)

Tip
- To stop the automatic channel presetting, press SELECT.



Step 5

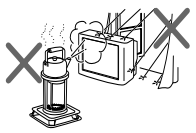
Press SELECT on the remote until "LANGUAGE/語文顯示: ENGLISH" appears on the screen, then press + or – to change the on-screen display language.

B WARNING

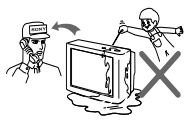
- Dangerously high voltages are present inside the TV.
- TV operating voltage: 220 – 240 V AC. (KV-PG21P42/PG21P42/G/L/N)
  110 – 240 V AC. (KV-PG21N70 (TAIWAN AND PHILIPPINES))
- Do not plug in the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

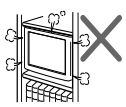
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



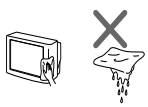
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



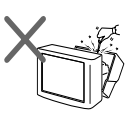
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



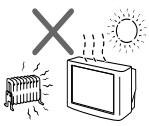
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



Clean the TV with a dry and soft cloth. Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.

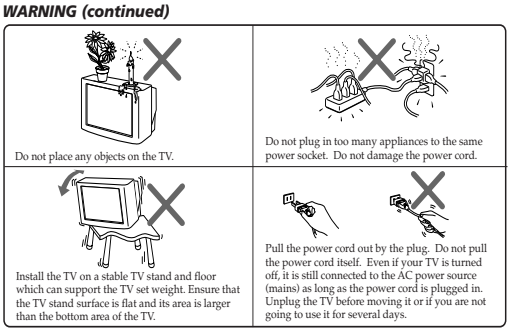


Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.



Your TV is recommended for home use only. Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

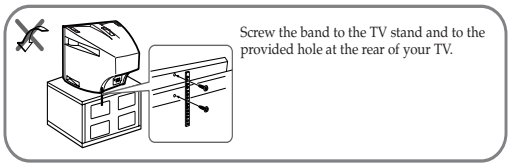
WARNING (continued)


Do not place any objects on the TV.
Do not plug in too many appliances to the same power socket. Do not damage the power cord.
Install the TV on a stable TV stand and floor which can support the TV set weight. Ensure that the TV stand surface is flat and its area is larger than the bottom area of the TV.
Pull the power cord out by the plug. Do not pull the power cord itself. Even if your TV is turned off, it is still connected to the AC power source (mains) as long as the power cord is plugged in. Unplug the TV before moving it or if you are not going to use it for several days.

C Securing the TV

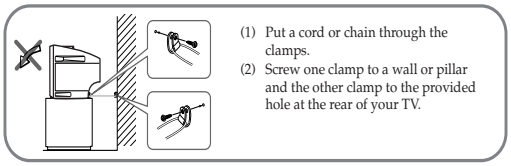
▶ **KV-TG21/PG21 only**

To prevent the TV from falling, use the supplied screws, clamps and band to secure the TV.



Screw the band to the TV stand and to the provided hole at the rear of your TV.

or

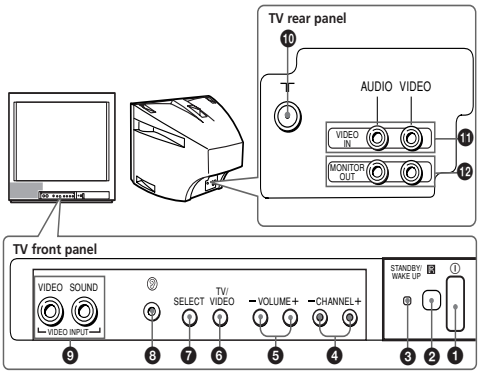


(1) Put a cord or chain through the clamps.
(2) Screw one clamp to a wall or pillar and the other clamp to the provided hole at the rear of your TV.

Note

- Use only the supplied screws. Use of other screws may damage the TV.

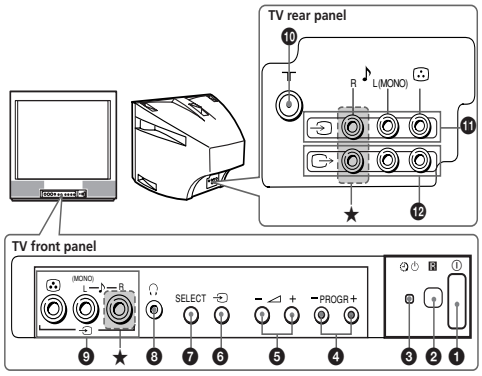
D TV front and rear panels (KV-PG21N70 (TAIWAN AND PHILLIPPINES))



Button	Function
❶ ⏻	Turn off or turn on the TV.
❷	Remote control sensor.
❸ STANDBY	Standby indicator.
❸ WAKE UP	Wake Up indicator.
❹ CHANNEL +/–	Select channel number.
❺ VOLUME +/– *	Adjust volume.
❻ TV/VIDEO	Select TV or video input.
❼ SELECT	Select the desired item.
❽	Earphone terminal.
❾ VIDEO INPUT	Video input terminal.
❿	Antenna input terminal.
⓫ VIDEO IN	Video input terminal.
⓬ MONITOR OUT	Monitor output terminal.

* You can also use the VOLUME +/– buttons on the TV to work as the +/– buttons on the remote.

D TV front and rear panels (KV-PG21P42/PG21P42/G/L/N)



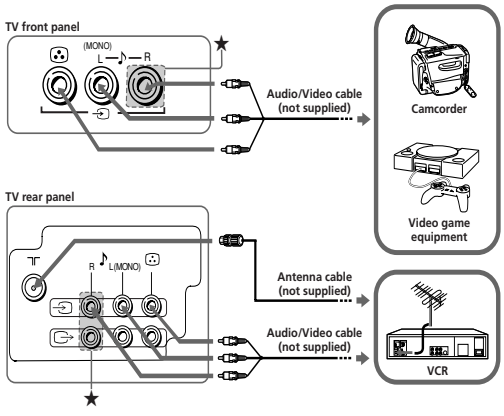
Button	Function
❶ ⏻	Turn off completely or turn on the TV.
❷	Remote control sensor.
❸ ⏻	Standby indicator.
❸	Wake Up indicator.
❹ PROGR +/–	Select program number.
❺ +/– *	Adjust volume.
❻	Select TV or video input.
❼ SELECT	Select the desired item.
❽	Headphone terminal. (KV-TG21 only)
❽	Earphone terminal. (KV-PG21/PG14 only)
❾, ⓫	Video input terminal.
❿	Antenna terminal.
⓬	Monitor output terminal.

* You can also use the +/– buttons on the TV to work as the +/– buttons on the remote.

★ *The R (audio input) jacks are only available for KV-TG21 only.*

E Connecting optional components (KV-PG21P42/PG21P42/G/L/N)

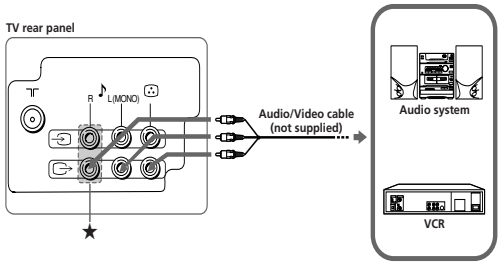
Connecting to the video input terminal ( )



Note

- Do not connect video equipment to (video input) at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

Connecting to the monitor output terminal ( )

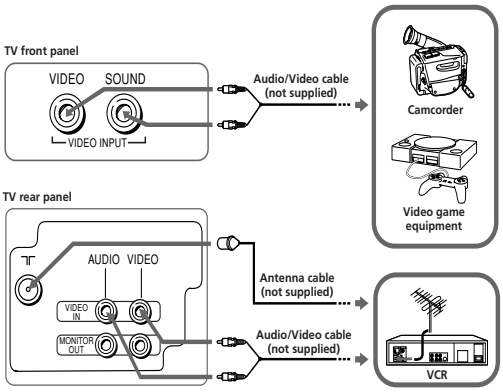


★ *The R (audio input) jacks are only available for KV-TG21 only.*

E Connecting optional components

(KV-PG21N70 (TAIWAN AND PHILLIPINES))

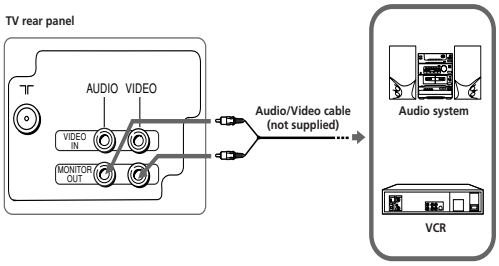
Connecting to the video input terminal



Note

- Do not connect video equipment to VIDEO INPUT at the front and VIDEO IN at the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

Connecting to the monitor output terminal

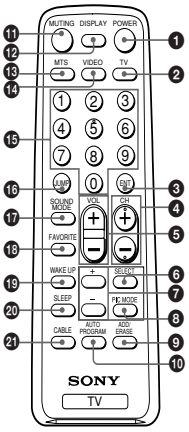


F Troubleshooting (KV-PG21P42/PG21P42/G/L/N)

If you find any problem while viewing your TV, please check the following guide. If any problem persists, contact your Sony dealer.

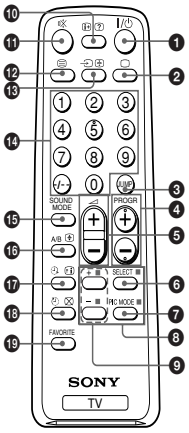
Symptom	Solutions
Snowy picture, noisy sound	• Check the antenna cable and connection on the TV, VCR and on the wall. • Preset the channel manually again. (See J) • Check the antenna setup. Contact a Sony dealer for advice.
Good picture, noisy sound	• Press A/B until the sound is optimal. (KV-PG21P42/PG21P42/G/L/N)
No picture, no sound	• Check the power cord, antenna and the VCR connections. • Press I/⏻ (power) or ⏻ (main power) to turn on the TV.
Good picture, no sound	• Press + to increase the volume level. • Press 🔇 to cancel the muting.
Dotted lines or stripes	• Do not use a hair dryer or other equipment near the TV. • Check the antenna setup. Contact a Sony dealer for advice.
Double images or "ghosts"	• Use the fine tuning ("FINE") function. (See J) (KV-PG21P42/PG21P42/G/L/N only) • Turn off or disconnect the booster if it is in use. • Check the antenna setup. Contact a Sony dealer for advice.
No color	• Select the appropriate color system. (See J) • Adjust the color level. (See K) • Check the antenna setup. Contact a Sony dealer for advice.
Abnormal color patches	• Keep external speakers or other electrical equipment away from the TV. Press ⏻ (main power) to turn off the TV for about 15 minutes, then turn it on again to demagnetize the TV.
The ⏻ (standby) indicator on your TV flashes red several times after every three seconds.	• Count the number of times the ⏻ (standby) indicator flashes. Press ⏻ (main power) to turn off your TV. Contact your nearest Sony service center.
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.
A "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.

H Remote control (KV-PG21N70 (TAIWAN AND PHILLIPINES))



Button	Function	See
❶ POWER	Turn off temporarily or turn on the TV.	–
❷ TV	Display the TV program.	–
❸ ENT	Confirm input number	–
❹ CH +/–	Select channel number.	–
❺ VOL +/–	Adjust volume.	–
❻ SELECT	Select the desired items.	–
❼ +/–	Adjust items.	–
❽ PIC MODE	Select picture mode.	K
❾ ADD/ERASE	Preset channels manually.	J
❿ AUTO PROGRAM	Preset channels automatically.	J
⓫ MUTING	Mute the sound.	–
⓬ DISPLAY	Display on-screen information.	–
⓭ VIDEO	Select TV or video input.	–
⓯ 0 – 9	Input numbers.	–
⓰ JUMP	Jump to previous channel number.	–
Timer operations		
⓳ WAKE UP	Set TV to turn on automatically.	I
⓴ SLEEP	Set TV to turn off automatically.	I
㉑ CABLE	Select the cable TV.	–
⓮ MTS	Not function for your TV.	–
⓱ SOUND MODE	Not function for your TV.	–
⓲ FAVORITE	Not function for your TV.	–

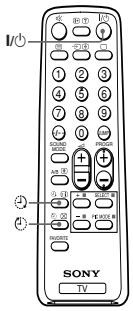
H Remote control (KV-PG21P42/PG21P42/G/L/N)



Button	Function	See
❶ I/⏻	Turn off temporarily or turn on the TV.	–
❷ 🖵	Display the TV program.	–
❸ JUMP	Jump to previous program number.	–
❹ PROGR +/–	Select program number.	–
❺ +/–	Adjust volume.	–
❻ SELECT	Select the desired item.	–
❼ PIC MODE	Select picture mode.	K
❾ +/–	Adjust items.	–
❿	Display on-screen information.	–
⓫ 🔇	Mute the sound.	–
⓭	Select TV or video input.	–
⓮ 0 – 9, -/--	Input numbers.	–
Timer operations		
⓱	Set TV to turn on automatically.	I
⓲	Set TV to turn off automatically.	I
Sound mode operations (KV-TG21P52 only)		
⓯ SOUND MODE	Select sound mode.	K
Bilingual operations		
⓰ A/B	Select bilingual mode.	M
Teletext operations		
❽ ■ (red, green, yellow, blue)	Not function for your TV.	–
❿ ?		
⓬ ☰		
⓭		
⓰		
⓱		
⓲ ⊗		
⓳ FAVORITE	Not function for your TV.	–

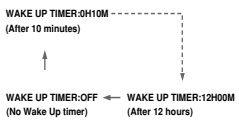
I Setting the timers (KV-PG21P42/PG21P42/G/L/N)

You can turn on and off your TV by using the ◴ and ◴ buttons respectively.



Setting the Wake Up timer

1 Press ◴ until the desired period of time appears on the screen.



The Wake Up timer starts immediately after you have set it.

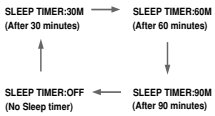
2 Select the program number or video input you want to wake up to.

3 Press I/⏻, or set the Sleep timer if you want the TV to turn off automatically.

The ◴ indicator on the TV lights up orange when the TV goes into standby mode.

Setting the Sleep timer

Press ◴ until the desired period of time appears on the screen.



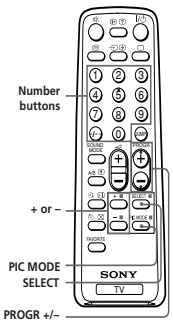
The Sleep timer starts immediately after you have set it.

Notes

- You can also cancel the Wake Up and Sleep timers by turning off the TV's main power.
- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode.

J Presetting channels (KV-PG21P42/PG21P42/G/L/N)

You can automatically preset up to 100 TV channels in numerical sequence from program number 1, or manually preset desired channels and channels that cannot be preset automatically.



Presetting channels automatically from a specified program number

1 Press SELECT until "AUTO PROGRAM" appears on the screen.

2 Press + or – once to enter the "AUTO PROGRAM" mode.

The on-screen display will start flashing.

3 Press PROGR +/– or the number buttons until the desired program number appears on the screen.

4 Press + or – to start presetting channels automatically.

Presetting channels manually

1 Press SELECT until "MANUAL PROGRAM" appears on the screen.

2 Press + or – once to enter the "MANUAL PROGRAM" mode.

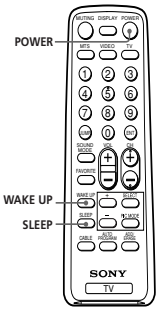
3 Press PROGR +/– or the number buttons until the desired program number appears on the screen.

4 Press + or – until the desired channel picture appears on the screen.

5 To preset other channels manually, repeat steps 3 to 4.

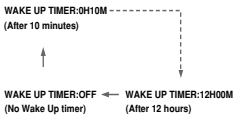
I Setting the timers (KV-PG21N70 (TAIWAN AND PHILLIPINES))

You can turn on and off your TV by using the WAKE UP and SLEEP buttons respectively.



Setting the Wake Up timer

1 Press WAKE UP until the desired period of time appears on the screen.



The Wake Up timer starts immediately after you have set it.

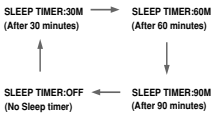
2 Select the program number or video input you want to wake up to.

3 Press POWER, or set the Sleep timer if you want the TV to turn off automatically.

The WAKE UP indicator on the TV lights up orange when the TV goes into standby mode.

Setting the Sleep timer

Press SLEEP until the desired period of time appears on the screen.



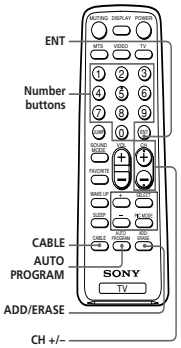
The Sleep timer starts immediately after you have set it.

Notes

- You can also cancel the Wake Up and Sleep timers by turning off the TV's main power.
- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode.

J Presetting channels (KV-PG21N70 (TAIWAN AND PHILLIPINES))

You can automatically preset cable TV, VHF or UHF broadcast channels, or manually preset the channels to receive new channels or channels with a weak signal.



Presetting channels automatically

1 Press ⏻ on the TV to turn on the TV.

2 Press CABLE to select "CABLE: ON".

3 Press AUTO PROGRAM on the remote or press SELECT and CHANNEL + on the TV at the same time for one to two seconds to preset the channels automatically.

Presetting channels manually

1 Press the number buttons to select the desired channel number, then press ENT.

2 Press ADD/ERASE.

"+" appears beside the channel number, indicating that presetting is complete.

Notes

- If you select "CABLE: ON", you will be able to receive 125 cable TV channels. If there are no cable TV channels, you will receive VHF broadcast channels.
- If you select "CABLE: OFF ", you will be able to receive 68 VHF or UHF broadcast channels only.

Presetting channels (continued) (KV-PG21P42/PG21P42/G/L/N)

To change the color system setting

If the color is abnormal when receiving programs through the ⅂ (antenna) terminal or the ⇦ (video input) terminal

(1) Press SELECT until "COLOR SYS" appears on the screen.

(2) Press + or – to select the appropriate color system until the color is optimal.

AUTO → PAL → NTSC3.58 → NTSC4.43

To skip program numbers

(1) Press PROGR +/– or the number buttons until the unused or unwanted program number appears on the screen.

(2) Press SELECT until "MANUAL PROGRAM" appears on the screen.

(3) Press + or – once to enter the "MANUAL PROGRAM" mode.

(4) Press PIC MODE to skip the unused or unwanted program number.

(5) Press SELECT to exit the "MANUAL PROGRAM" mode.

Note

- To restore the skipped program number again, preset the channel automatically or manually.

To use the fine tuning function

The fine tuning (FINE) function may help to reduce the following problems: double images and lines moving across the TV screen.

You can use the fine tuning function as below:

(1) Select the program number you want to adjust.

(2) Press SELECT until "MANUAL PROGRAM" appears on the screen.

(3) Press + or – once to enter the "MANUAL PROGRAM" mode.

(4) Press ⇨ to display "FINE" on the screen.

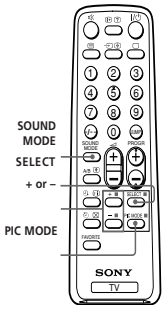
(5) Press + or – continuously until the above problems are minimized. The + or – icon on the screen flashes while tuning.

(6) Press SELECT to exit the "MANUAL PROGRAM" mode.

K Customizing the picture and sound

(KV-PG21P42/PG21P42/G/L/N)

You can customize the picture and sound by selecting the picture and sound modes or by adjusting its settings.



Selecting the picture mode

Press PIC MODE to select the desired picture mode.

Select	To
"DYNAMIC"	view high contrast pictures.
"STANDARD"	view normal contrast pictures.
"SOFT"	view mild pictures.

Selecting the sound mode

▶ **KV-TG21P52 only**

Press SOUND MODE to select the desired sound mode.

Select	To
"♪ DYNAMIC"	listen to dynamic and clear sound that emphasizes the low and high sound.
"♪ DRAMA"	listen to sound that emphasizes vocals and background music.
"♪ SOFT"	listen to soft sound.

Adjusting the picture and sound settings

1 Press SELECT until the desired setting appears.

Each time you press SELECT, the setting item will change as follows:

PICTURE → COLOR → BRIGHT → HUE → SHARP → BASS → TREBLE → BALANCE

2 Press + or – to adjust the item.

3 To adjust other items, repeat steps 1 to 2.

Notes

- "BASS", "TREBLE" and "BALANCE" can be adjusted for KV-TG21P52 only.
- "HUE" can be adjusted for the NTSC color system only.
- Reducing "SHARP" can also reduce picture noise.

Presetting channels (continued) (KV-PG21N70 (TAIWAN AND PHILLIPINES))

To change the color system setting

If the color is abnormal when receiving programs through the video input terminal.

(1) Press SELECT until "COLOR SYS" appears on the screen.

(2) Press + or – to select the appropriate color system until the color is optimal.

AUTO → PAL → NTSC3.58 → NTSC4.43

To skip program numbers

(1) Press CH +/– until the unused or unwanted channel number appears on the screen.

(2) Press ADD/ERASE to skip the unused or unwanted channel number.

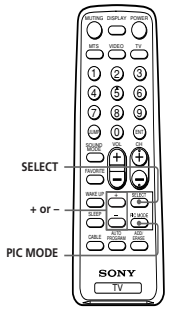
"–" appears beside the channel number, indicating that disabling is complete.

Note

- To restore the skipped channel number again, preset the channel automatically or manually.

K Customizing the picture (KV-PG21N70 (TAIWAN AND PHILLIPINES))

You can customize the picture by selecting the picture mode or by adjusting its settings.



Selecting the picture mode

Press PIC MODE to select the desired picture mode.

Select	To
"DYNAMIC"	view high contrast pictures.
"STANDARD"	view normal contrast pictures.
"SOFT"	view mild pictures.

Adjusting the picture setting

1 Press SELECT until the desired setting appears.

Each time you press SELECT, the setting item will change as follows:

PICTURE → COLOR → BRIGHT → HUE → SHARP

2 Press + or – to adjust the item.

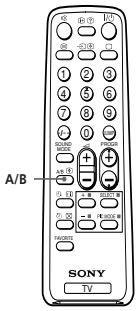
3 To adjust other items, repeat steps 1 to 2.

Notes

- "HUE" can be adjusted for the NTSC color system only.
- Reducing "SHARP" can also reduce picture noise.

L Enjoying bilingual program (KV-PG21P42/PG21P42/G/L/N)

You can enjoy bilingual program of A2 bilingual system by using the A/B button.



When receiving an A2 program

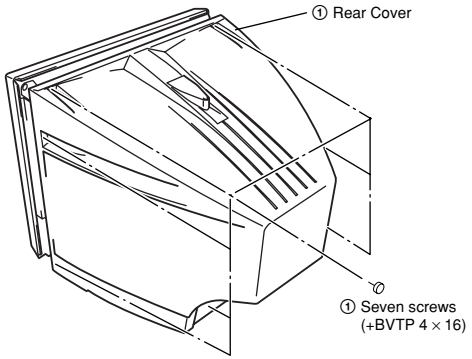
Broadcasting	On-screen display (Selected sound)
A2 bilingual	MAIN (Main sound) → SUB (Sub sound)

Note

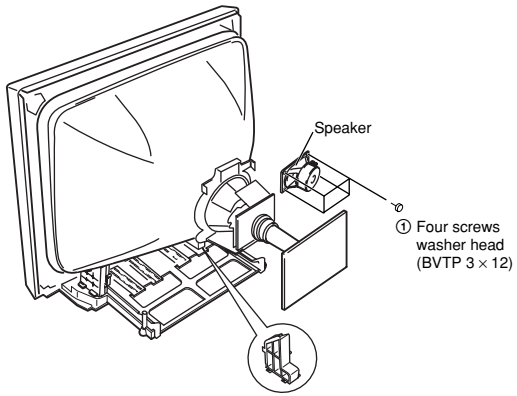
- When viewing a non-bilingual program, select the main sound. Otherwise, you may hear some noise or abnormal sound.

SECTION 2
DISASSEMBLY

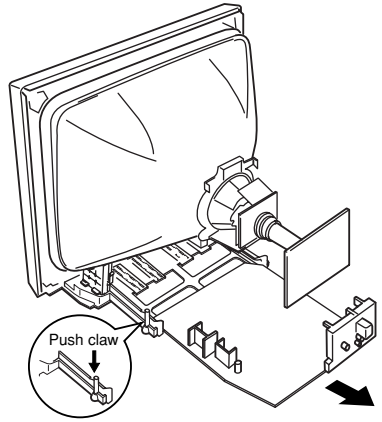
2-1. REAR COVER REMOVAL



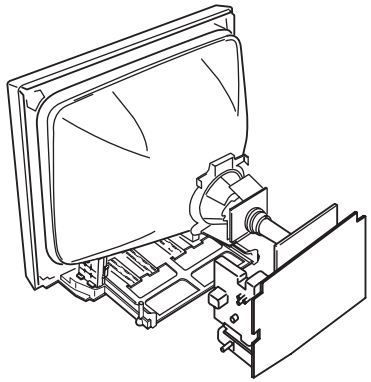
2-2. SPEAKER REMOVAL



2-3. CHASSIS ASSY REMOVAL



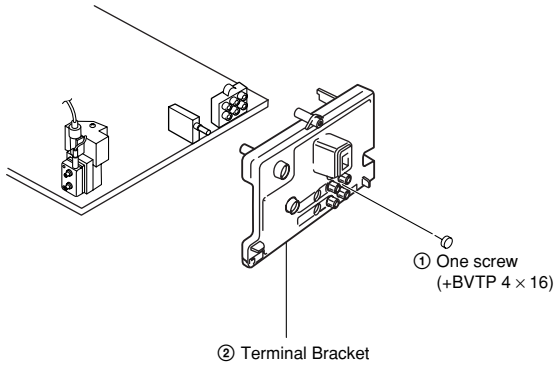
2-4. SERVICE POSITION



Caution: Do not take out CRT support block while TV set in standing position.

Note: Undress necessary wires that creates tension while placing the chassis into Service Position.

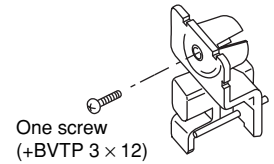
2-5. TERMINAL BRACKET REMOVAL



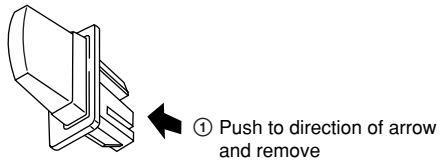
2-6. REPLACEMENT OF PARTS

For replacements of light guide,unscrew them, exchange with new parts and fix them with screws respectively.

2-6-1. Replacement of Light Guide



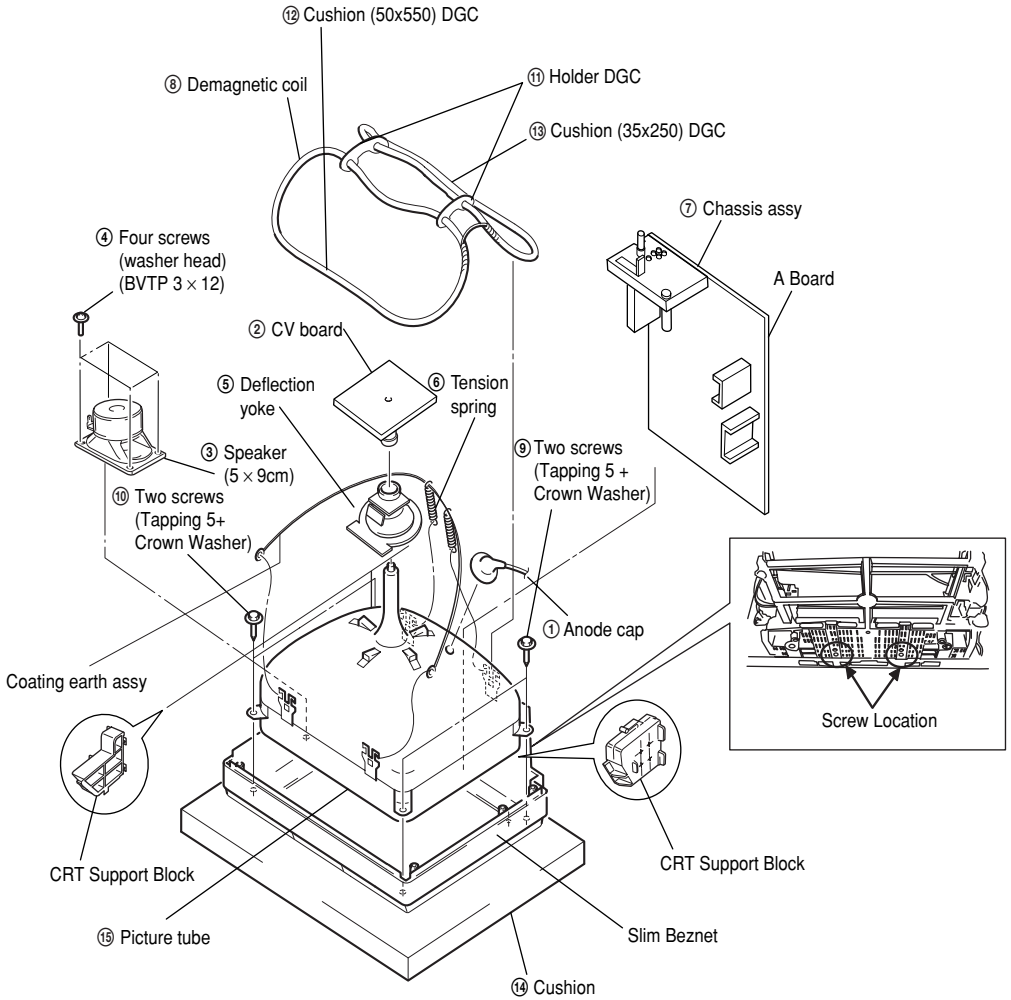
2-6-2. Replacement of Power Button



2-7. PICTURE TUBE REMOVAL

Note:

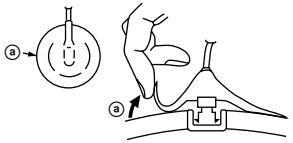
- Please make sure the TV set is not in standing position before removing necessary CRT support located on bottom right and left.



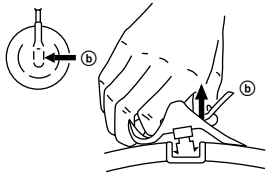
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

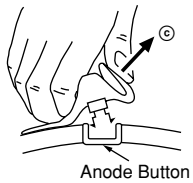
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



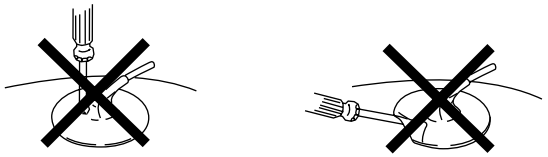
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.

• HOW TO HANDLE AN ANODE-CAP

① Do not damage the surface of anode-caps with sharp shaped objects.
② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.
③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.



SECTION 3
SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast } normal
   Brightness
2. Set the pattern generator raster signal to a green raster.
3. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 3-1 through 3-4.)
4. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 3-1.)
5. Switch the raster signal to blue, then to red and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 3-4.)

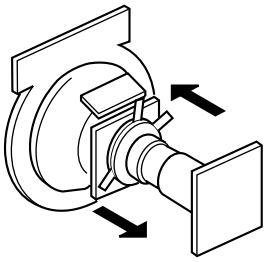


Fig. 3-1

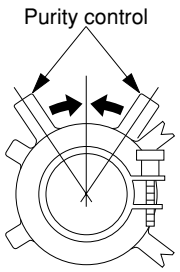


Fig. 3-2

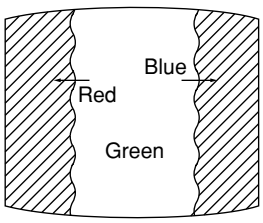


Fig. 3-3

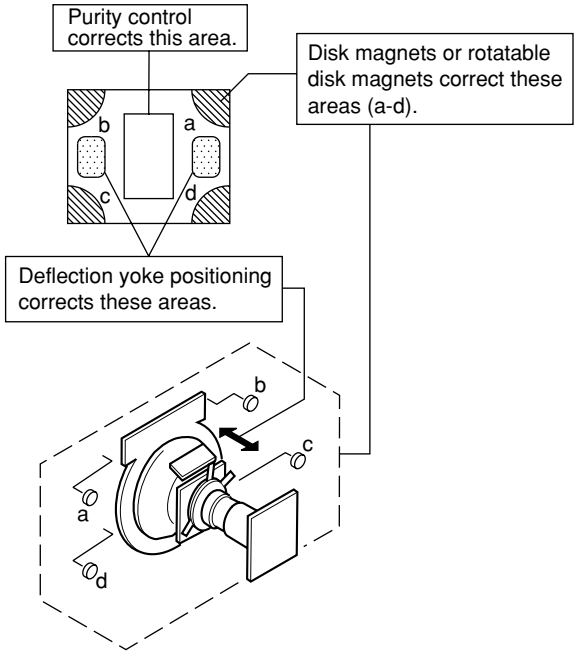


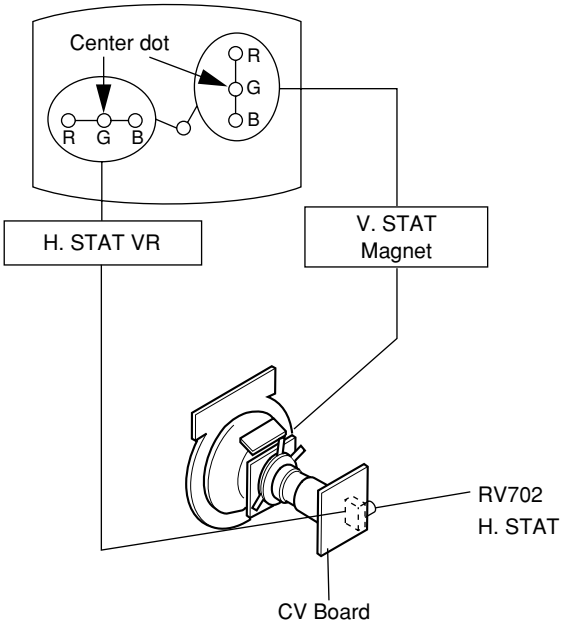
Fig. 3-4

3-2. CONVERGENCE

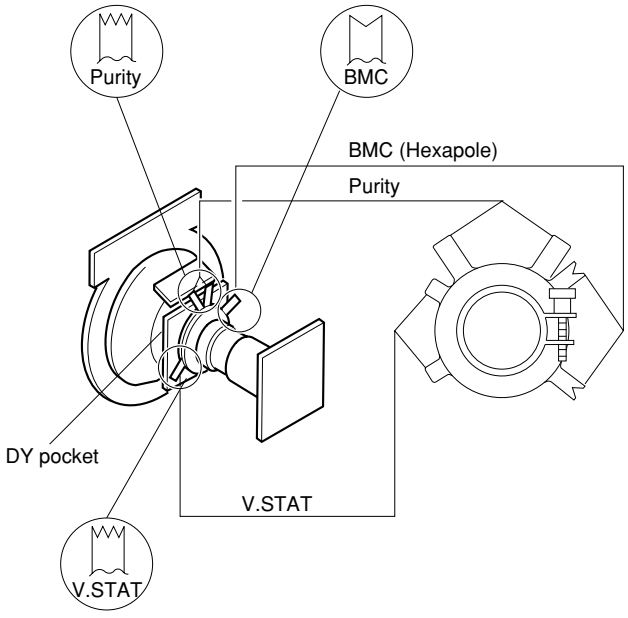
Preparation :

- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Receive dot/hatch signal.
- Pic mode: Soft.

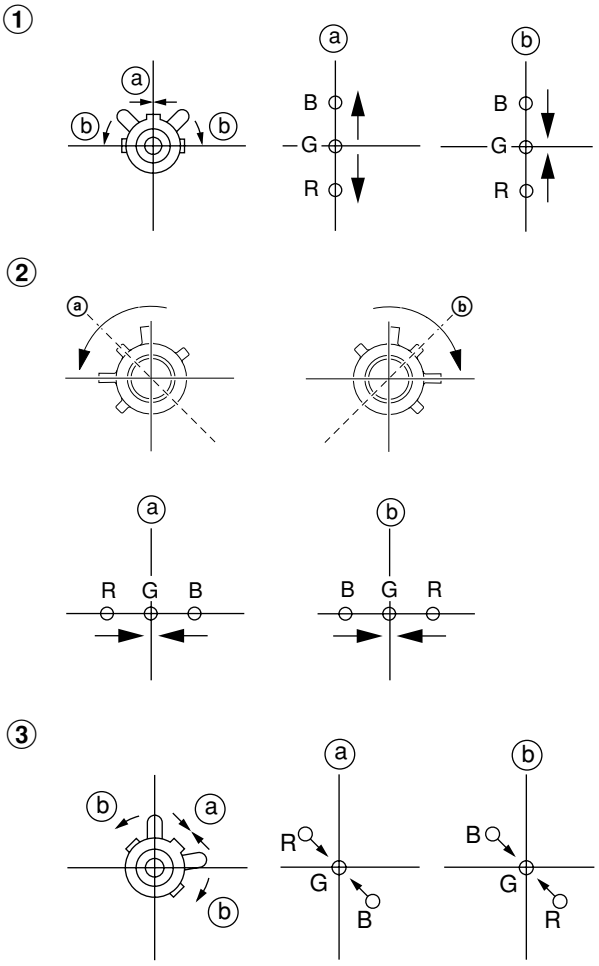
(1) Horizontal and Vertical Static Convergence



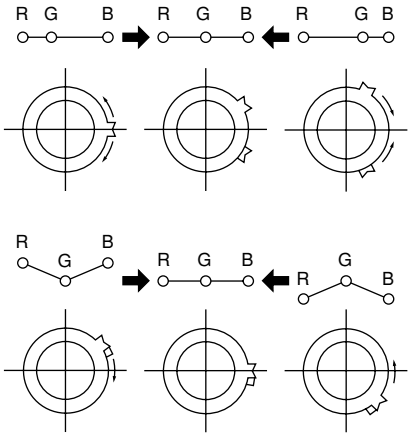
1. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving horizontally), adjust the H.STAT VR control so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)



- Operation of V. Stat magnet
  If the V. Stat magnet is moved in the "a" and "b" arrows, the red, green and blue dots move as shown below.



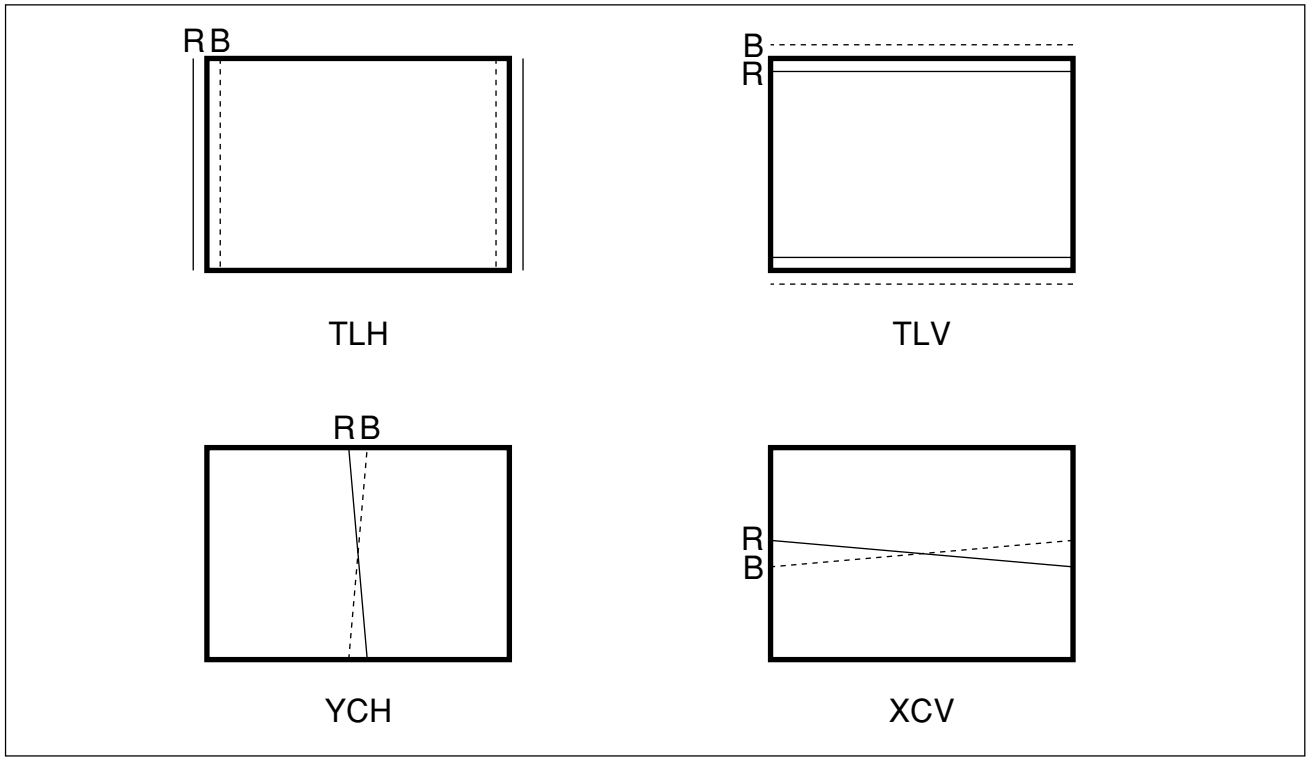
④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



(2) Dynamic Convergence Adjustment

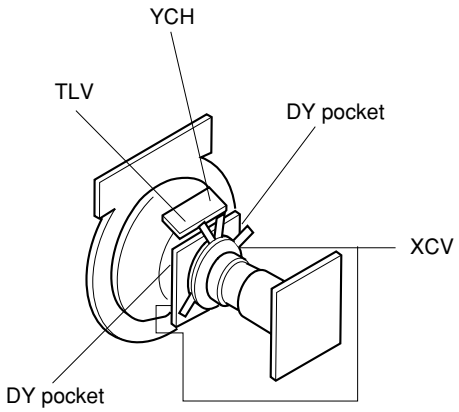
Preparation:

Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence

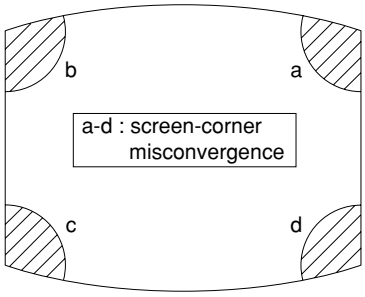


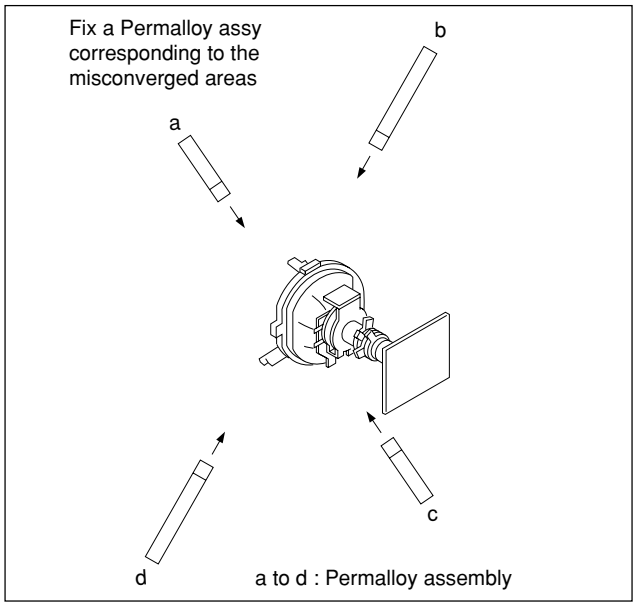
TLH	Insert	TLH	Correction Plate to DY Pocket (Left or Right)
YCH	Rotate	YCH	VOL on DY
TLV	Rotate	TLV	VOL ON DY
XCV	Rotate	XCV	Adj core on DY

ON DY:



(3) Screen-corner Convergence

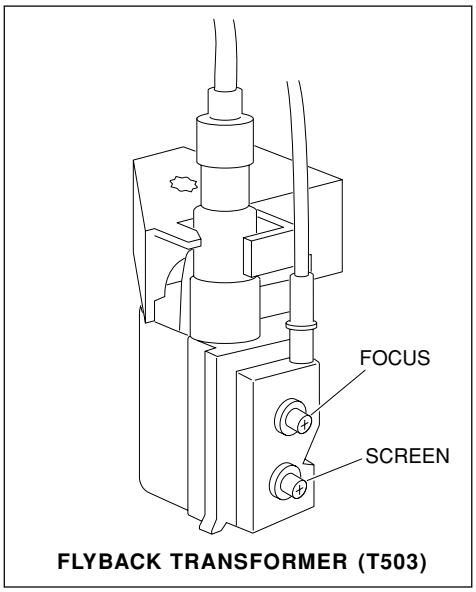




3-3. FOCUS ADJUSTMENT

FOCUS adjustment should be completed before W/B adjustment.

1. Receive digital monoscope pattern.
2. Set "Picture Mode" to "DYNAMIC".
3. Adjust focus VR so that the center of screen becomes just focus.
4. Change the receiving signal to white pattern and blue back.
5. Confirm magenta ring is not noticeable. Incase magenta is very obvious, adjust focus VR to take balance of magenta ring and focus.

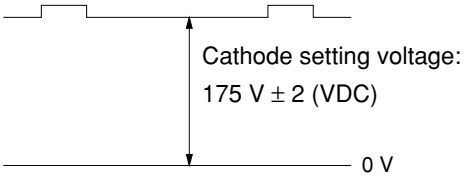


FLYBACK TRANSFORMER (T503)

3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the CV board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Adjust G2 (screen) on the FBT until picture shows the point before cut off.

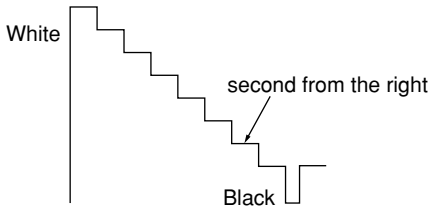


2.A. WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 4-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set 49 (ABL) and IF (VP2) service mode to 00.
4) Set Picture to DYNAMIC.
5) Select OB (RDR) with [1] and [4], and set the level to 25 with [3] and [6] for best white balance.
6) Select OC 'GDR' and OD 'BDR' with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].
8) Set back 49 'ABL' and IF 'VP2' service mode to original data.

2.B. SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Set 49(ABL) and IF (VP2) service mode to 00
3) Input a staircase signal of black to white from the pattern generator.
4) BRIGHTNESS .... 50%.
   PICTURE ..... MINIMUM
5) Select OE 'SBR' with [1] and [4], and adjust OE 'SBR' level with [3] and [6] so that the second stripe from the right is dimly lit.
6) Write into the memory by pressing [MUTING] then [0].
7) Set back 49 (ABL) and IF (VP2) service mode to original data.



SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENT WITH COMMANDER

Service adjustments to this model can be performed using the supplied Remote Commander RM-952

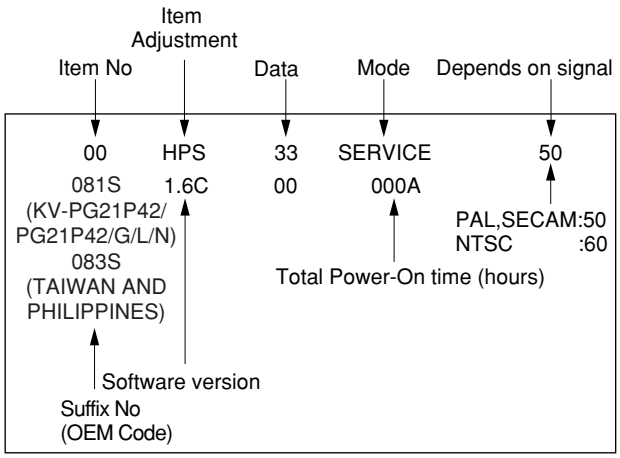
a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

This operation sequence puts the unit into service mode.

The screen display is :



b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

[1], [4] ↓	Select the adjustment item.
[3], [6] ↓	Raise/lower the data value.
[MUTING] ↓	Writes.
[0]	Executes the writing.

e. OTHER FUNCTION VIA REMOTE COMMANDER

[7], [0]	All the data becomes the values in memory.
[8], [0]	All user control goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[2], [0]	Copy and write all data.
[MUTE], [0]	Write 50Hz adjustment data to 60Hz or vice versa.

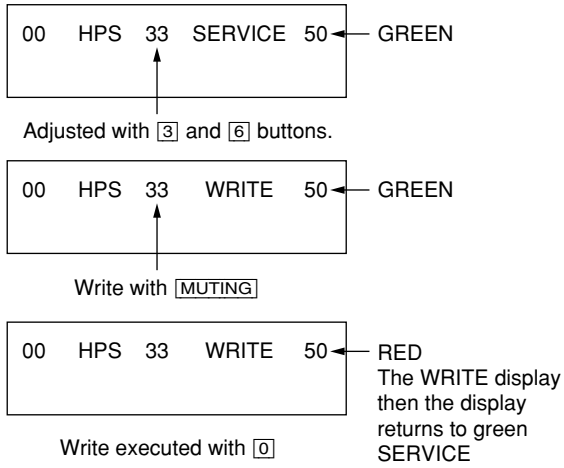
4-2. ADJUSTMENT METHOD

Item Number 00 HPS

This explanation uses H Shift as an example.

1. Select “00 HPS” with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

Example on screen display :-



Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table (KV-PG21N70 (Taiwan and Philippines))

Item No.	Adj. Item	Data Range	Initial Data	Note for Different Data	Function	Device
00	HPS	00–3F	24	50/60Hz	H Shift	TDA8843/44(8A)
01	HSZ	00–3F	23	50/60Hz	H Size	
02	PAP	00–3F	21	50/60Hz	Pin Amplitude	
03	CPN	00–3F	29	50/60Hz	Corner Pin	
04	TLT	00–3F	20	50/60Hz	Tilt	
05	VSL	00–3F	20	50/60Hz	V Slope	
06	VAP	00–3F	1D	50/60Hz	V Amplitude	
07	SCO	00–3F	20	50/60Hz	S Correction	
08	VPS	00–3F	20	50/60Hz	V Shift	
09	VZM	00–3F	19		Vertical Zoom	
0A	VSC	00–3F	20	50/60Hz	Vertical Scroll	
0B	RDR	00–3F	25	Dynamic/Others	R Drive	
0C	GDR	00–3F	25	Dynamic/Others	G Drive	
0D	BDR	00–3F	25	Dynamic/Others	B Drive	
0E	SBR	00–7F	4B		Sub Brightness	
0F	PMX	00–3F	27	TV/Video/Teletext	Picture Maximum Data	
10	PMI	00–3F	05		Picture Minimum Data	
11	SHU	00–0F	05	TV/Video	Sub Hue	
12	SSH	00–03	01	TV/Video	Sub Sharpness	
13	SC1	00–3F	1F	50/60Hz	Sub Color Lower	
14	SC2	00–3F	0B	50/60Hz	Sub Color Higher	
15	FO	00–03	00	TV/Video/Teletext	01 Time Constant	
16	AGT	00–3F	30	TV/Video/Teletext	AGC Take Over	
17	VSW	00–01	0	TV/Video/Teletext	Video Mute Switch	
18	FOR	00–03	00		Forced Field Frequency	
19	DL	00–01	0		De-interlace	
1A	POC	00–01	0		Fixed 01 Synchro. Mode	
1B	COR	00–01	0	TV/Video/Teletext	Noise Coring	
1C	RBL	00–01	0	TV/Video/Teletext	RGB Blanking	
1D	YDL	00–0F	08	PAL/NTSC/SECAM	Y-Delay	
1E	VP1	00–FF	00		Extra Bits (see page 23)	
1F	VP2	00–FF	01		Extra Bits (see page 23)	
20	VP3	00–FF	08		Extra Bits (see page 23)	
21	ING	00–0F	00	M System/non-M/Video	Input Gain	TDA7438(88)
22	VOM	00–3F	01	M System only	Volume Output Gain	
23	BCS	00–03	01		Bass Center Shift	
24	TCS	00–03	01		Treble Center Shift	
25	BKP	00-3F	00		Picture Data at Blanking OFF	Other Control
26	ODL	00-FF	10		Power ON Delay	
27	OSH	00-3F	0A		OSD H Position	
28	TSH	00–03	00	00:B/G, 01:I, 02:D/K, 03:M	TV System at Auto Preset	
29	DKS	00–01	01		D/K Stereo enable/disable	
2A	MUT	00–01	00		Muting on/off at No Sync	
2B	ABL	00–01	00		Bright ABL Switch	
2C	SCM	00–01	00		SECAM Trap active/inactive	
2D	SLS	00–01	01		Active SL.OR.IFI Sync	
2E	SSV	00–07	02		Space Sound Volume Step Up	
2F	VPW	00–7F	28		Timer of Video Processor start up wait	
30	SCA	00–01	00		Shipping Condition of Cable on/off	
31	SCH	00-7F	02		Shipping condition of Channel Number	
32	SSV	00-7F	02		Space sound volume step up	
33	OP2	00–FF	0F		Optional Flags 1 (see page 23)	
34	OP3	00–FF	00		Optional Flags 2 (see page 23)	

NOTE

- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
  In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

Adjustment Item Table (KV-PG21P42)

Item No.	Adj. Item	Data Range	Initial Data	Note for Different Data	Function	Device
00	HPS	00–3F	2A	50/60Hz	H Shift	TDA8843/44(8A)
01	HSZ	00–3F	1F	50/60Hz	H Size	
02	PAP	00–3F	1F	50/60Hz	Pin Amplitude	
03	CPN	00–3F	1F	50/60Hz	Corner Pin	
04	TLT	00–3F	1F	50/60Hz	Tilt	
05	VSL	00–3F	26	50/60Hz	V Slope	
06	VAP	00–3F	0F	50/60Hz	V Amplitude	
07	SCO	00–3F	0F	50/60Hz	S Correction	
08	VPS	00–3F	1F	50/60Hz	V Shift	
09	VZM	00–3F	19		Vertical Zoom	
0A	VSC	00–3F	1F	50/60Hz	Vertical Scroll	
0B	RDR	00–3F	1F	Dynamic/Others	R Drive	
0C	GDR	00–3F	25	Dynamic/Others	G Drive	
0D	BDR	00–3F	25	Dynamic/Others	B Drive	
0E	SBR	00–7F	58		Sub Brightness	
0F	PMX	00–3F	27	TV/Video/Teletext	Picture Maximum Data	
10	PMI	00–3F	04		Picture Minimum Data	
11	SHU	00–0F	07	TV/Video	Sub Hue	
12	SSH	00–03	01	TV/Video	Sub Sharpness	
13	SC1	00–3F	20	50/60Hz	Sub Color Lower	
14	SC2	00–3F	08	50/60Hz	Sub Color Higher	
15	FO	00–03	00	TV/Video/Teletext	01 Time Constant	
16	AGT	00–3F	00	TV/Video/Teletext	AGC Take Over	
17	VSW	00–01	0	TV/Video/Teletext	Video Mute Switch	
18	FOR	00–03	03		Forced Field Frequency	
19	DL	00–01	00		De-interlace	
1A	POC	00–01	00		Fixed 01 Synchro. Mode	
1B	COR	00–01	01	TV/Video/Teletext	Noise Coring	
1C	RBL	00–01	00	TV/Video/Teletext	RGB Blanking	
1D	YDL	00–0F	0A	PAL/NTSC/SECAM	Y-Delay	
1E	VP1	00–FF	00		Extra Bits (see page 23)	
1F	VP2	00–FF	01		Extra Bits (see page 23)	
20	VP3	00–FF	FF		Extra Bits (see page 23)	
21	WST	00–FF	15		W/G Stereo Threshold	MSP3417G(80)
22	WBT	00–FF	EC		W/G Bilingual Threshold	
23	WLL	00–FF	05		W/G Monaural Threshold	
24	WAC	00–0F	01		W/G Agreement count	
25	WDL	00–FF	30		W/G Search Delay	
26	NDL	00–FF	20		NICAM Search Delay	
27	SDL	00–FF	10		Stereo Status Read Delay	
28	AGC	00–01	01		AGC Switch auto/constant	
29	REL	00–3F	28		AGC Gain at Constant Mode	
2A	CRM	00–01	00		Carrier Muting on/off	
2B	ACO	00–01	01		Audio Clock-out on/off	
2C	FP	00–7F	1B		FM Prescale for B/G, I, D/K	
2D	FPM	00–7F	32		FM Prescale for M	
2E	FH	00–7F	36		FM Prescale for HDEV (non-M)	
2F	FHM	00–7F	65		FM Prescale for HDEV (M)	
30	WGP	00–7F	1C		W/G Prescale	
31	NIP	00–7F	7F		NICAM Prescale	
32	ERR	00–FF	50		Auto FM Switch Threshold	
33	VOL	00–7F	6D		DFP Volume Maximum	
34	ING	00–0F	00	M System/non-M/Video	Input Gain	TDA7438(88)
35	VOM	00–3F	00	M System only	Volume Output Gain	
36	BCS	00–03	01		Bass Center Shift	
37	TCS	00–03	02		Treble Center Shift	
38	TXH	00–FF	2A		Horizontal Display Position	SAA5264(58)
39	TXV	00–3F	27		Vertical Display Position (line offset from V-sync)	
3A	THD	00–7F	00		H-sync Active Edge Shift	
3B	TVD	00–7F	3F		V-sync Active Edge Shift	
3C	HPL	00–01	01	00:Positive, 01:Negative	H-sync Polarity Configuration	
3D	VPL	00–01	01	00:Positive, 01:Negative	V-sync Polarity Configuration	
3E	FPL	00–01	01	00:V-sync second half line, 01:V-sync first half line	Field Polarity Configuration	
3F	FMD	00–03	00	00:Auto, 01:Default, 02:Fastext, 03:Top mode	Force Mode	

Adjustment Item Table

Item No.	Adj. Item	Data Range	Initial Data	Note for Different Data	Function	Device
40	TBR	00-0F	08		Set Teletext RGB Brightness	SAA5264(58)
41	NOP	00-0F	01		National Option Table Configuration	
42	TCH	00-03	01		Twisted Character Set Configuration	
43	BKP	00-3F	00	00 : Positive, 01 : Negative	Picture Data at Blanking OFF	Other Control
44	ODL	00-FF	10		Power ON Delay	
45	OSH	00-3F	0A		OSD H Position	
46	TSH	00–03	00	00:B/G, 01:I, 02:D/K, 03:M	TV System at Auto Preset	
47	DKS	00–01	01		D/K Stereo enable/disable	
48	MUT	00–01	00		Muting on/off at No Sync	
49	ABL	00–01	01		Bright ABL Switch	
4A	SCM	00–01	01		SECAM Trap active/inactive	
4B	SLS	00–01	01		Activate SL.OR.IFI Sync	
4C	SSV	00–07	02		Space Sound Volume Step Up	
4D	VPW	00–7F	35		Timer of Video Processor start up wait	
4E	OP1	00–FF	2F		Optional Flags 0 (see page 23)	
4F	OP2	00–FF	0F		Optional Flags 1 (see page 23)	
50	OP3	00–FF	00		Optional Flags 2 (see page 23)	

NOTE

- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
  In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

ITEM INFORMATION

No. 1E VP1

Item	-	-	BCO	OSO	SBL	HBL	FCO	FFI
KV-PG21N70 (Philippines)	0	0	0	0	0	0	0	0
KV-PG21N70 (Taiwan)	0	0	0	0	0	0	0	0
KV-PG21P42	0	0	0	0	0	0	0	0
KV-PG21P42/G	0	0	0	0	0	0	0	0
KV-PG21P42/L	0	0	0	0	0	0	0	0
KV-PG21P42/N	0	0	0	0	0	0	0	0

BCO	Switch-on behaviour 1=Switch -on of picture via internal delay 0=Without delay	00(4)
OSO	1=Switch off in vertical overscan 0=Switch-off undefind	18(7)
SBL	Service blanking 1= on 0= off	0B(7)
HBL	RGB Blanking Mode 1 = wide blanking, 0 = normal blanking	02(7)
FCO	Forced Color-on 1=no colour killer 0=normal colour killer function	1B(0)
FFI	Fast filler IF-PLL 1=increased time constant 0=normal time constant	1A(1)

No. 1F VP2

Item	-	-	MAT	DS	DSA	EBS	BLS	BKS
KV-PG21N70 (Philippines)	0	0	0	0	0	0	0	1
KV-PG21N70 (Taiwan)	0	0	0	0	0	0	0	1
KV-PG21P42	0	0	0	0	0	0	0	1
KV-PG21P42/G	0	0	0	0	0	0	0	1
KV-PG21P42/L	0	0	0	0	0	0	0	1
KV-PG21P42/N	0	0	0	0	0	0	0	1

MAT	PAL-SECAM-/NTSC Matrix 1 =PAL matrix, 0=adapted to standard	0E(7)
DS	Dynamic skin control on/off 1= on 0= off	1A(3)
DSA	Dynamic skin control angle 1=correction angle 117 degrees 0=correction angle 123 degrees	1A(2)
EBS	Extended Blue Stretch 1= on 0= off	1A(0)
BLS	Blue stretch 1= on 0= off	18(4)
BKS	Black stretch 1= on 0= off	18(3)

No. 20 VP3

Item	BB	AKB	BPS	CB	ACL	CL2	CL1	CL0
KV-PG21N70 (Philippines)	0	0	0	0	1	0	0	0
KV-PG21N70 (Taiwan)	0	0	0	0	1	0	0	0
KV-PG21P42	0	0	0	0	1	0	0	0
KV-PG21P42/G	0	0	0	0	1	0	0	0
KV-PG21P42/L	0	0	0	0	1	0	0	0
KV-PG21P42/N	0	0	0	0	1	0	0	0

BB	Blue back when no video signal is identified 1= on 0= off	18(0)
AKB	Black current stabilisation 1=not active 0=active	02(6)
BPS	Bypass of chroma base-band delay line 1=bypassed 0=active	19(6)
CB	Chroma bandpass centre frequency 1= 1.1x Fsc 0=Fsc	18(5)
ACL	Automatic colour limiting 1= active 0= not active	19(5)

CL2	CL1	CL0	Cathode Drive amplitude
0	0	0	57V
0	0	1	63V
0	1	0	70V
0	1	1	77V
1	0	0	84V
1	0	1	91V
1	1	0	99V
1	1	1	107V

No. 4E OP1

Item	-	AV Input		COMB	B/G	I	D/K	M
KV-PG21N70 (Philippines)	0	0	1	0	1	1	1	1
KV-PG21N70 (Taiwan)	0	0	1	0	1	1	1	1
KV-PG21P42	0	0	1	0	1	0	0	0
KV-PG21P42/G	0	0	1	0	1	0	0	0
KV-PG21P42/L	0	0	1	0	1	0	0	0
KV-PG21P42/N	0	0	1	0	1	0	0	0

AV Input 00 = no AV Input model 01 = 1 AV Input model
10 = 2 AV Input model 11 = Not available

COMB (for NTSC model) 1 = Enable external comb filter, 0 =Disable external comb filter

Other optional function will be enabled if the corresponding bit is set to 1.

No. 4F OP2

Item	No NICAM	US ST	HDEV	I V-Curve	XTAL SEL		SECAM	2nd Lang.
KV-PG21N70 (Philippines)	0	0	0	0	1	1	1	1
KV-PG21N70 (Taiwan)	0	0	0	0	1	1	1	1
KV-PG21P42	0	0	0	0	1	1	0	1
KV-PG21P42/G	0	0	0	0	1	1	0	1
KV-PG21P42/L	0	0	0	0	1	1	0	1
KV-PG21P42/N	0	0	0	0	1	1	0	1

No NICAM 1 = NICAM search is disable in any TV system, 0 = NICAM search operates
US ST (Reserved for NTSC model)

1 V-Curve 1 = using common volume curve for every mode and every TV system
(for monaural model) 0 = another volume curve available for video mode and M system

XTAL SEL 00 = only 4.43 XTAL 01 = only 3.58 XTAL
10 = not used 11 = both 4.43 and 3.58 XTAL

Other optional function will be enabled if the corresponding bit is set to 1.

No. 50 OP3

Item	Pict Rot.	Auto TV Sys.	No Bal.	SPC SOUND	Korean ST	VM	H.K. Bil.	Thai Bil.
KV-PG21N70 (Philippines)	0	0	0	0	0	0	0	0
KV-PG21N70 (Taiwan)	0	0	0	0	0	0	0	0
KV-PG21P42	0	0	1	0	0	0	0	1
KV-PG21P42/G	0	0	1	0	0	0	0	1
KV-PG21P42/L	0	0	1	0	0	0	0	1
KV-PG21P42/N	0	0	1	0	0	0	0	1

No Bal. 1 = no balance in analog select items, 0 = balance included
(for AV stereo model)

SPC SOUND 1 = Space Sound available, 0 = not available

Korean ST (Reserved for NTSC model)

H.K. Bil. 1 = NICAM bilingual available (No NICAM stereo), 0 = not available
(for monaural model)

Other optional function will be enable if the corresponding bit is set to 1.

OPERATION GUIDE

SERVICE MODE

How to set up new NVM (or initialize already written one)
(1) AC ON
(2) Enter Service Mode - describing below how to enter
(3) Push the commander button “5” and “0” sequentially (only set initial data into RAM, but not write them into NVM yet)
(4) Push the commander button “2” and “0” sequentially (copy the data into all NVM area - all wide modes and 50/60Hz respectively)
(5) Push the commander button “8” and “0” sequentially (initialize user data, select program 1 and exit Service Mode)
(6) Select TV system and execute Auto Preset

How to enter Service Mode
- At power ON, push the commander button “test” and “TV ON” sequentially
- At stand-by, push the commander button “display”, “5”, “vol +” and “power” sequentially

How to exit Service Mode
- Push the commander button “other ON” or power (AC) OFF

How to increment/decrement items and data
- Items : push the commander button “1” / “4”
- Data : push the commander button “3” / “6” (not write into NVM)

Other operations
- Write data into NVM - push the commander button “mute” and “0” sequentially
- Read data from NVM - push the commander button “7” and “0” sequentially
- Copy 50Hz data into 60Hz area - push the commander button “display” and “0” sequentially

SELF DIAGNOSIS MODE

How to enter Self Diagnosis Mode
- At stand-by, push the commander button “display”, “5”, “vol-” and “power” sequentially

How to exit Self Diagnosis Mode
- Push the commander button “other ON” or power (AC) OFF

Other operations
- Clear data and Write into NVM - push the commander button “8” and “0” sequentially

HOTEL TV MODE

How to enter Hotel TV Mode ON stage
- At stand-by, push the commander button “display”, “MUTE”, “vol +” and “power” sequentially
- The Hotel TV setup display, where the maximum level of the volume can be applied (=35 or above)
- Write data into NVM - push the commander button “mute” and “0” sequentially

How to enter Hotel TV Mode OFF stage
- At stand-by, push the commander button “display”, “MUTE”, “vol -” and “power” sequentially
- Write data into NVM - push the commander button “mute” and “0” sequentially

Modification Note

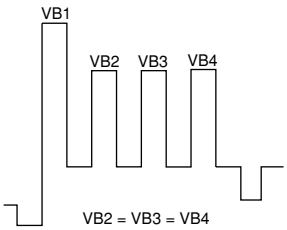
The item including the new addition is yellow.

1. The flag was added to bit 7 of OP1. This is the flag which chooses the volume curve used by HA (ME) model. (V2. IC) (KV-PG21P42 only).

4-3. PICTURE QUALITY ADJUSTMENT

SUB COLOR ADJUSTMENT

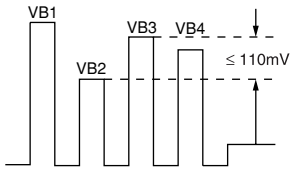
1. Select Video.
2. Input a PAL color-bar.
3. Set to the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN300, A board.
5. Set to Service Mode and select 13 'SC1' with [1] and [4] of the commander then adjust to VB2=VB3=VB4 with [3] and [6].
6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust 13 'SC1' as step 2 to 5 when receiving NTSC color-bar.



VB2 = VB3 = VB4 (Difference is within 70mV)

SUB HUE ADJUSTMENT

1. Select Video.
2. Input a NTSC 3.58, color-bar into Video/TV mode.
3. Set the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN300, A board.
5. Select 11"SHU" with [1] and [4] of the commander by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6] .



   The highest level of VB1,VB2,VB3,VB4 must be aligned at the same line. Ideal difference level between VB2 and VB3 should be within ± 110mV.
6. Press [MUTING] → [0] of the commander to write the data.
7. Select TV channel with NTSC 3.58 and repeat 3 to 5.
8. Press [MUTING] → [0] of the commander to write the data.
9. Single system model with NTSC 4.43, select TV channel with NTSC 4.43 and repeat 3 to 5.

4-4. DEFLECTION ADJUSTMENT

NORMAL MODE (50Hz)

1. Set to Service mode.
2. Input PAL color bar.
3. Using the [1] and [4] button, select category GEO (Service Mode).
4. Raise/lower the data using the [3] and [6] buttons.
   Select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMPLITUDE
	03	CPN	CORNER PIN
	04	TLT	TLT
	05	VSL	V SLOPE
	06	VAP	VERTICAL AMPLITUDE
	07	SCO	S CORRECTION
	08	VPS	V SHIFT

NORMAL MODE (60Hz)

5. Input 525/60Hz signal.
6. Using the [1] and [4] buttons select category GEO (Service Mode).
7. Select and adjust the following items to obtain obtimum image.
   Raise/lower the data with the [3] and [6] buttons.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMPLITUDE
	03	CPN	CORNER PIN
	04	TLT	TILT
	05	VSL	V SLOPE
	06	VAP	VERTICAL AMPLITUDE
	07	SCO	S CORRECTION
	08	VPS	V SHIFT

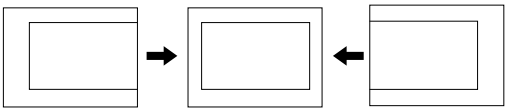
4-5. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the fine adjustment.
   Write the data per each item number ([MUTING] +[0]).
4. Select item numbers 4E 'OP0', 4F 'OP1', 50 'OP2' and respectively set the bit per model with command buttons [3] and [6] .
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory. (This will also cancel Service Mode.)

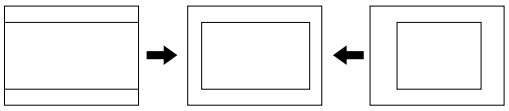
4-6. PICTURE DISTORTION ADJUSTMENT

Item Number 00 – 08

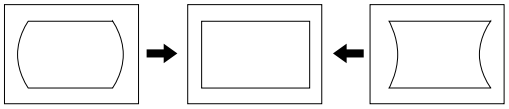
00 HPS (H POSITION)



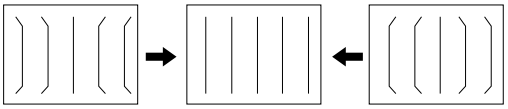
01 HSZ (H SIZE)



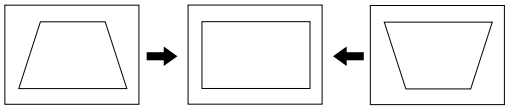
02 PAP (PIN AMPLITUDE)



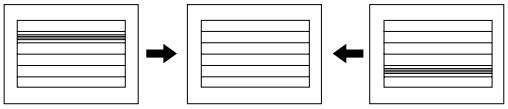
03 CPN (CORNER PIN)



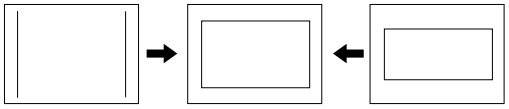
04 TLT (TILT)



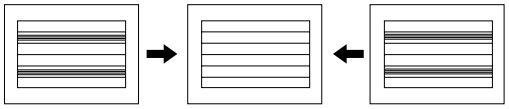
05 VSL (V SLOPE)



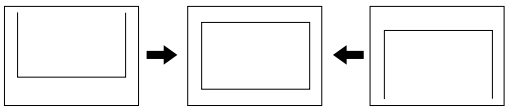
06 VAP (VERTICAL AMPLITUDE)



07 SCO (S CORRECTION)



08 VPS (V SHIFT)

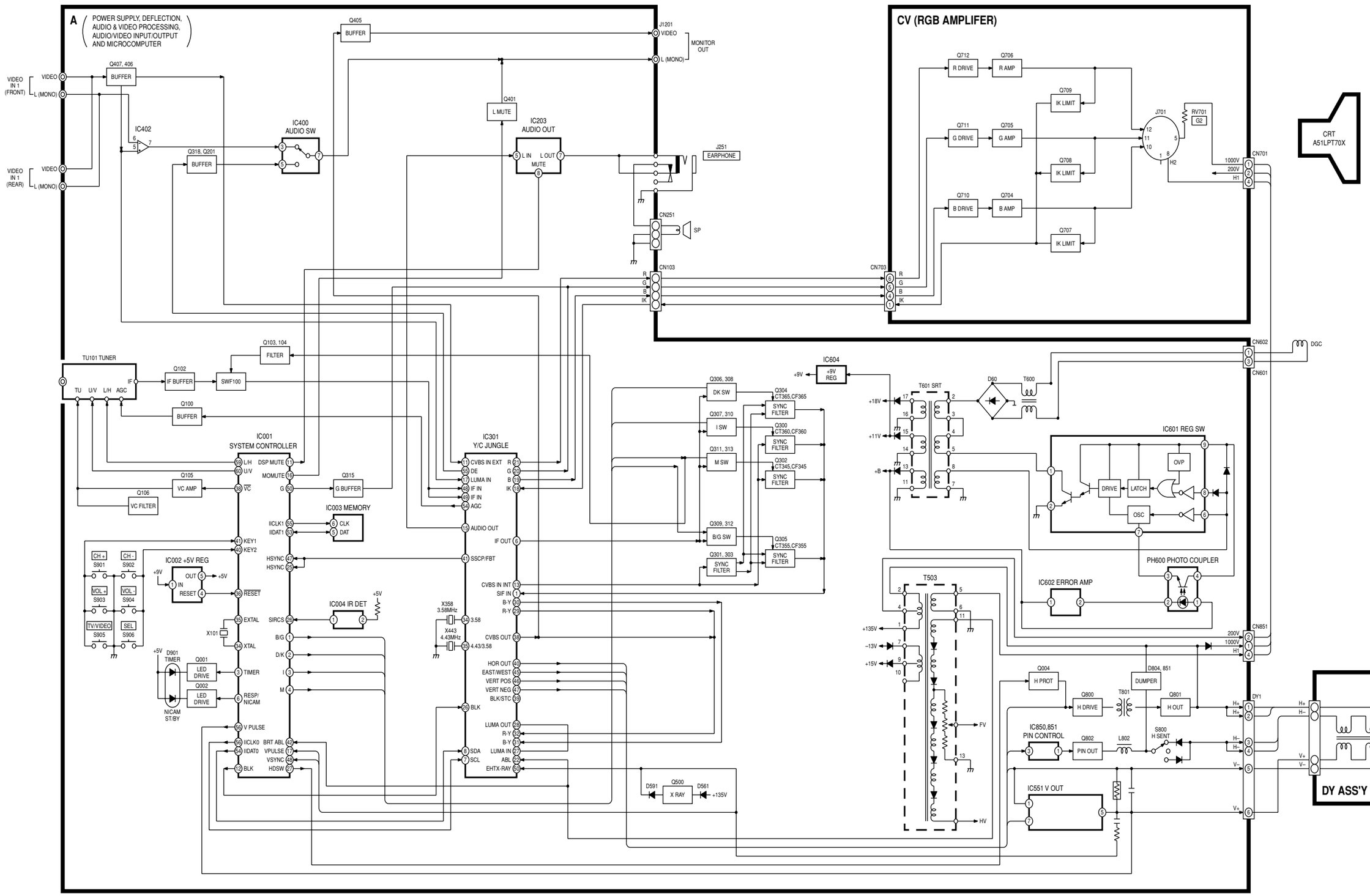


MEMO

KV-PG21P42/G/L/N/PG21N70 RM-952 RM-915

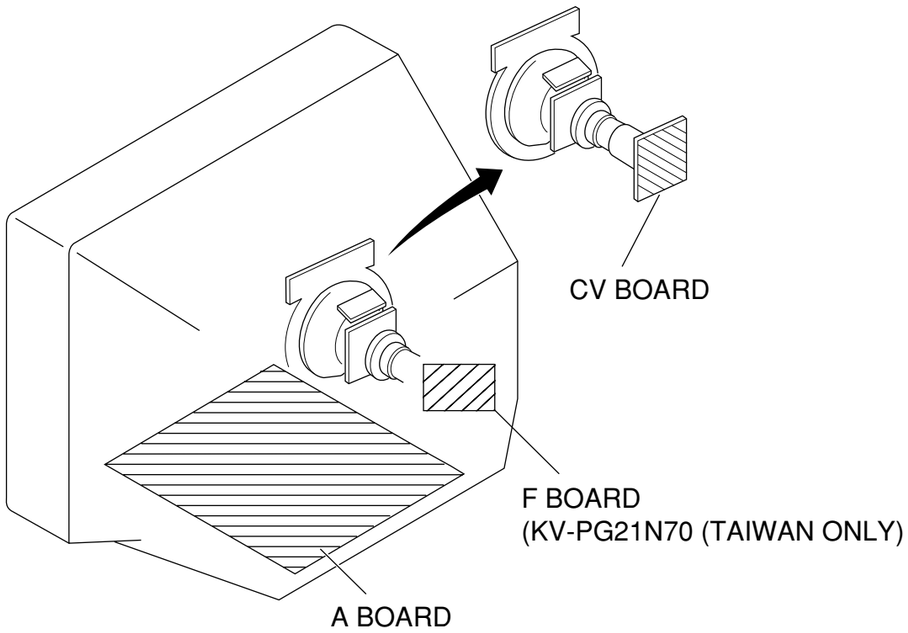
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



KV-PG21P42/G/L/N/PG21N70 RM-952 RM-915

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAM

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- △ : internal component.
- : panel designation or adjustment for rrepair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Readings are taken with a color-bar signal input.**
  no mark : COMMON
  ( ) : PAL
  [ ] : NTSC 3.58
- **Readings are taken with a 10 MΩ digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in Volt.**
- **✻ : Cannot be measured.**
- **Circled numbers are waveform references.**
- **: B +bus.**
- **: B –bus.**
- **⇨ : signal path.**

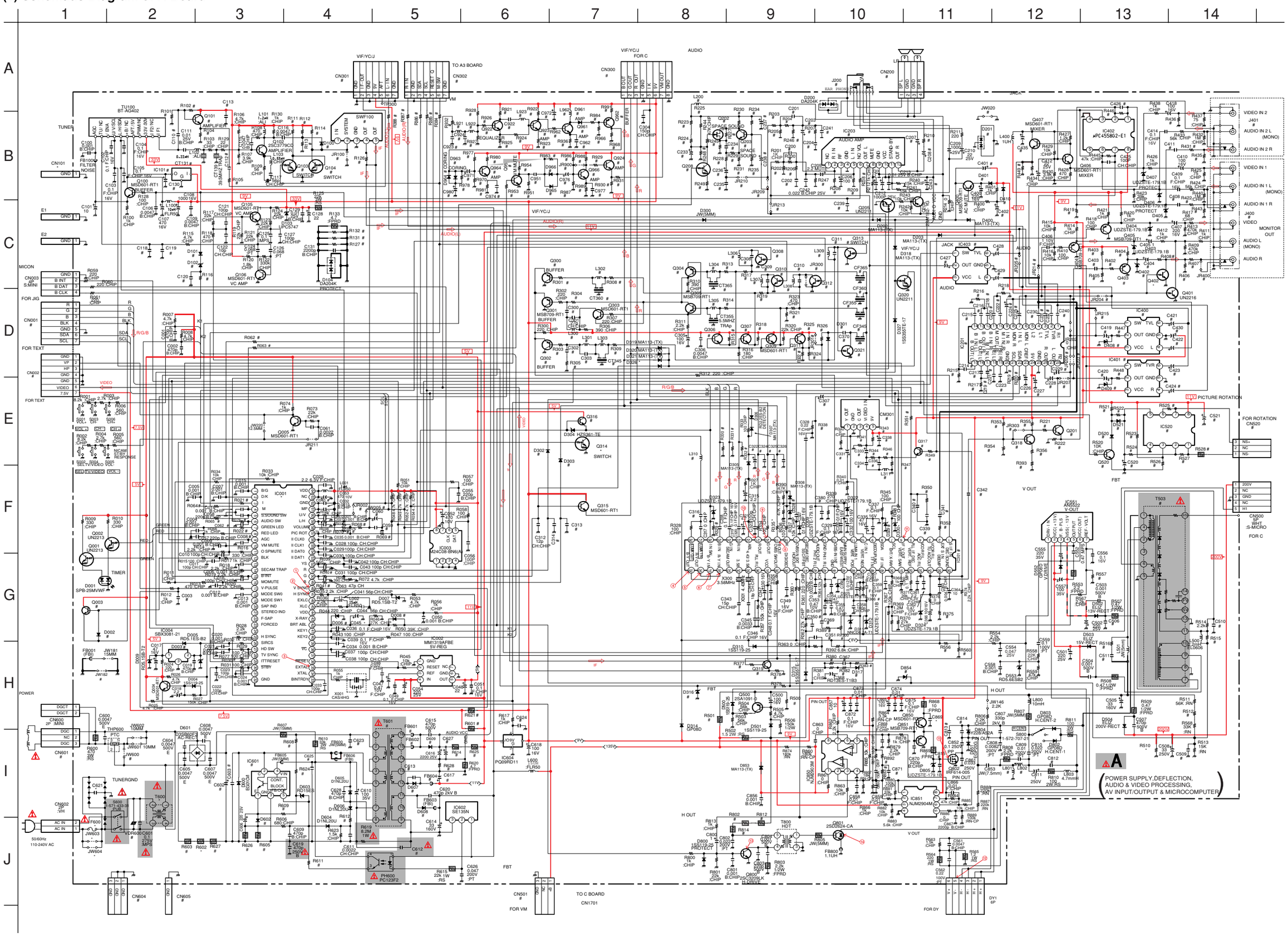
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

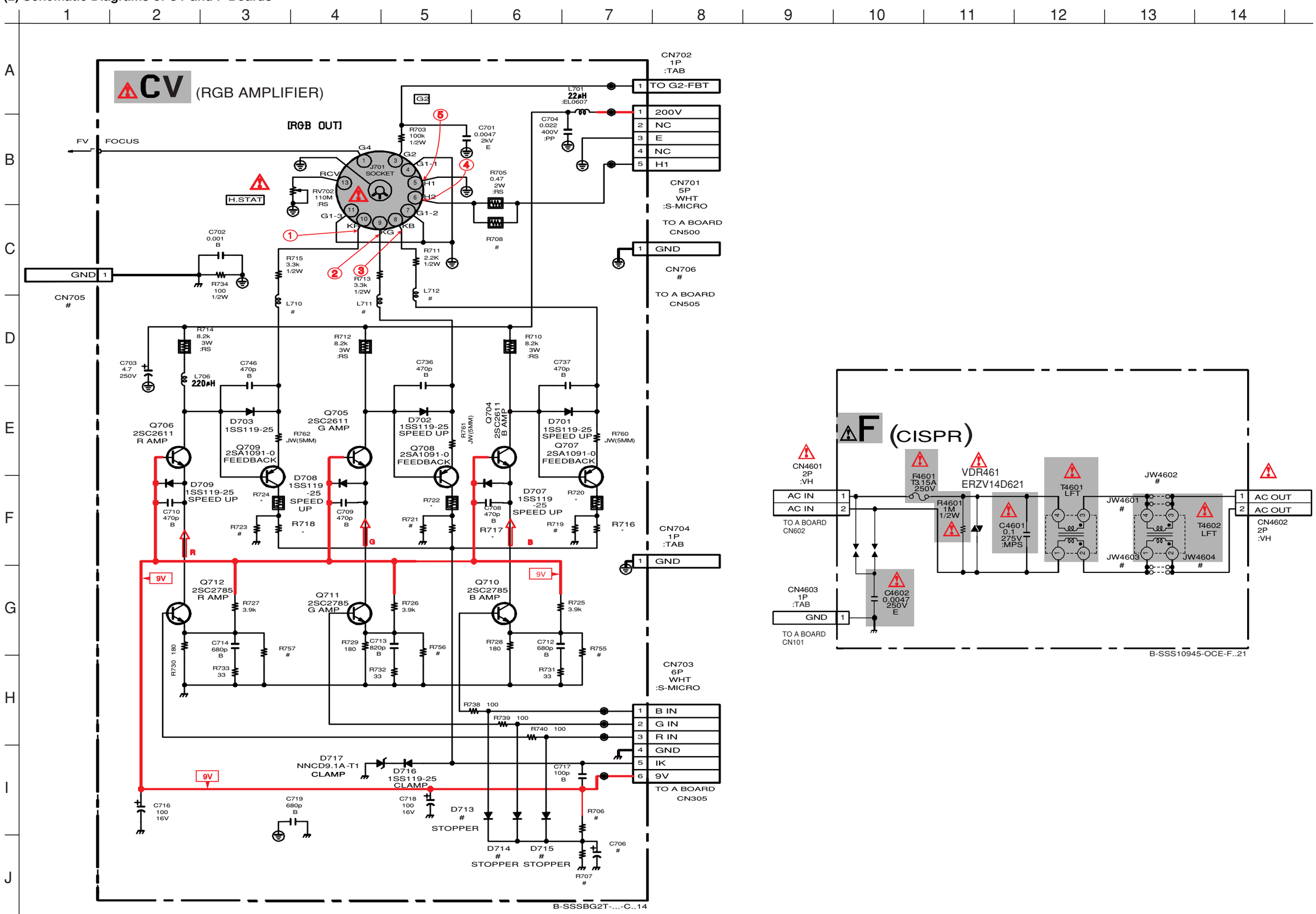
Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

KV-PG21P42/G/L/N/PG21N70 RM-952 RM-915

(1) Schematic Diagram of A Board



(2) Schematic Diagrams of CV and F Boards



A (1/3) Board ✲ Mark List

	KV-PG21P42/PG21P42/G/L/N	KV-PG21N70(PHILIPPINES)	KV-PG21N70(TAIWAN)
C026	0.001P :CHIP	#	#
C027	0.001P :CHIP	#	#
C036	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C039	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C049	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C051	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C102	0.1 16V	#	#
C103	0.1 16V	#	#
C104	0.1 16V	#	#
C105	0.1 16V	#	#
C115	0.0047 :CHIP	1UH	1UH
C124	0.068 :PT	#	#
C125	0.1 :PP	#	#
C126	0.068 :PT	#	#
C127	100P :CHIP	#	#
C130	#	100 16V	100 16V
C242	0.022 25V :CHIP	0.022 :CHIP	0.022 :CHIP
C300	56P :CHIP	#	#
C301	27P :CHIP	#	#
C302	#	47P :CHIP	47P :CHIP
C303	#	68P :CHIP	68P :CHIP
C308	390P :CHIP	#	#
C310	390P :CHIP	#	#
C311	#	470P :CHIP	470P :CHIP
C318	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C319	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C320	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C327	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C328	0.22 16V :CHIP	0.22 25V :CHIP	0.22 25V
C329	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C330	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C337	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C339	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C342	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C346	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C348	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C353	0.47 10V :CHIP	0.47 16V :CHIP	0.47 16V :CHIP
C355	0.47 10V :CHIP	0.47 16V :CHIP	0.47 16V :CHIP
C359	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C370	#	0 :CHIP	0 :CHIP
C409	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C414	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C554	0.047 25V	0.047	0.047
C556	0.1 16V :CHIP	0.1 25V :CHIP	0.1 25V :CHIP
C602	330 450V	330 450V	560 250V
C621	0.0047	#	#
C869	0.1 25V	0.1	0.1
C872	0.1 16V	0.1 25V	0.1 25V
C875	0.1 16V	0.1 25V	0.1 25V
C922	#	470P :CHIP	470P :CHIP
C924	#	33P :CHIP	33P :CHIP
C951	#	0.01P :CHIP	0.01P :CHIP
C971	#	10	10
C972	#	100 16V	100 16V
C976	#	10	10
C980	#	10	10
CF345	#	(F4.5C)	(F4.5C)
CF355	(F5.5C)	#	#
CF365	(F5.74B)	#	#
CLP003	#	PIN LEAD COATING	PIN LEAD COATING
CN101	#	TAB CONTACT	TAB CONTACT
CN300	6P	8P	8P
CN501	#	3P	3P
CN600	#	2P	2P
CT131	Trap Ceramic	#	#
CT139	Trap Ceramic	#	#
CT345	#	(T4.5C)	(T4.5C)
CT355	(T55B)	#	#
CT365	(T55B)	#	#
D007	UDZSTE-175.1B	RD5.1SB-T2	RD5.1SB-T2
D009	UDZSTE-175.1B	RD5.1SB-T2	RD5.1SB-T2
D301	#	1SS355TE-17	1SS355TE-17
D961	#	1SS355TE-17	1SS355TE-17
D963	#	1SS355TE-17	1SS355TE-17
D964	#	1SS355TE-17	1SS355TE-17
F600	3.15A/250V	3.15A/250V	#
IC001	CXP85224A-081S	CXP85224A-083S	CXP85224A-083S
IC101	#	TA7805S	TA7805S
JR002	#	0 :CHIP	0 :CHIP
JR030	#	0 :CHIP	0 :CHIP
JR301	#	0 :CHIP	0 :CHIP
L300	15 UH	#	#

A (2/3) Board ✲ Mark List

	KV-PG21P42/PG21P42/G/L/N	KV-PG21N70(PHILIPPINES)	KV-PG21N70(TAIWAN)
L301	#	8.2 UH	8.2 UH
L303	#	8.2 UH	8.2 UH
L304	12 UH	#	#
L305	12 UH	#	#
L306	2.2 UH	#	#
L308	2.2 UH	#	#
L309	#	2.7 UH	2.7 UH
L921	#	150UH	150UH
L922	#	150UH	150UH
L923	#	6.8UH	6.8UH
L962	#	39 UH	39 UH
PS601	#	2P	2P
Q005	MSD601-RT1	#	#
Q106	MSD601-RT1	#	#
Q301	MSB709-RT1	#	#
Q302	#	MSB709-RT1	MSB709-RT1
Q303	MSD601-RT1	#	#
Q304	MSB709-RT1	#	#
Q305	MSB709-RT1	#	#
Q306	MSD601-RT1	#	#
Q308	UN2216	#	#
Q309	MSD601-RT1	#	#
Q311	#	MSD601-RT1	MSD601-RT1
Q312	UN2216	#	#
Q313	#	UN2216	UN2216
Q319	#	MSD601-RT1	MSD601-RT1
Q321	#	UN2216	UN2216
Q922	#	MSD601-RT1	MSD601-RT1
Q923	#	MSD601-RT1	MSD601-RT1
Q924	#	MSD601-RT1	MSD601-RT1
Q956	#	MSD601-RT1	MSD601-RT1
Q961	#	MSD601-RT1	MSD601-RT1
Q962	#	MSD709-RT1	MSD709-RT1
Q964	#	MSD601-RT1	MSD601-RT1
Q966	#	MSD601-RT1	MSD601-RT1
R034	10K :CHIP	10K :CHIP	#
R037	1.0K :CHIP	#	#
R038	1.0K :CHIP	#	#
R062	1.0K :CHIP	#	#
R063	1.0K :CHIP	#	#
R064	#	1.0K :CHIP	1.0K :CHIP
R073	22K :CHIP	#	#
R115	4.7K :CHIP	#	#
R120	1.8K :CHIP	#	#
R121	22K :CHIP	#	#
R122	330K :CHIP	#	#
R123	22K :CHIP	#	#
R134	0 :CHIP	1K :CHIP	1.0K :CHIP
R135	#	1K :CHIP	1.0K :CHIP
R302	220 :CHIP	#	#
R303	#	220 :CHIP	220 :CHIP
R304	1.2K :CHIP	#	#
R305	#	680 :CHIP	680 :CHIP
R306	390 :CHIP	#	#
R307	220 :CHIP	#	#
R309	#	150 :CHIP	150 :CHIP
R310	390 :CHIP	#	#
R311	2.2K :CHIP	#	#
R313	330K :CHIP	#	#
R314	330K :CHIP	#	#
R315	22K :CHIP	#	#
R317	470 :CHIP	#	#
R320	22K :CHIP	#	#
R323	470 :CHIP	#	#
R324	#	470 :CHIP	470 :CHIP
R325	#	22K :CHIP	22K :CHIP
R326	#	22K :CHIP	22K :CHIP
R377	#	100 :CHIP	100 :CHIP
R378	#	1K :CHIP	1.0 :CHIP
R602	1.0 10W	0.68 10W	0.68 10W
R603	1.0 10W	0.68 10W	0.68 10W
R627	1.0 10W	0.68 10W	0.68 10W
R921	#	680 :CHIP	680 :CHIP
R922	#	680 :CHIP	680 :CHIP
R923	#	150 :CHIP	150 :CHIP
R924	#	150 :CHIP	150 :CHIP
R925	#	390 :CHIP	390 :CHIP
R926	#	470 :CHIP	470 :CHIP
R927	#	3.3K :CHIP	3.3K :CHIP
R928	#	10K :CHIP	10K :CHIP
R929	#	100 :CHIP	100 :CHIP

A (3/3) Board ✲ Mark List

	KV-PG21P42/PG21P42/G/L/N	KV-PG21N70(PHILIPPINES)	KV-PG21N70(TAIWAN)
R930	#	1.0K :CHIP	1.0K :CHIP
R931	#	100 :CHIP	100 :CHIP
R932	#	4.7K :CHIP	4.7K :CHIP
R936	#	3.3K :CHIP	3.3K :CHIP
R962	#	220 :CHIP	220 :CHIP
R966	#	1.2K :CHIP	1.2K :CHIP
R968	#	2.2K :CHIP	2.2K :CHIP
R970	#	33K :CHIP	33K :CHIP
R977	#	56K :CHIP	56K :CHIP
R978	#	12K :CHIP	12K :CHIP
R980	#	1.2K :CHIP	1.2K :CHIP
R981	#	470 :CHIP	470 :CHIP
R983	#	0 :CHIP	0 :CHIP
R984	#	100 :CHIP	100 :CHIP
R986	#	33K :CHIP	33K :CHIP
R987	#	8.2K :CHIP	8.2K :CHIP
R988	#	1.2K :CHIP	1.2K :CHIP
R989	#	470 :CHIP	470 :CHIP
R991	#	470 :CHIP	470 :CHIP
SWF100	SAWF	Filter Surface Wave	Filter Surface Wave
T600	Coil line filter	Transformer line filter	Transformer line filter
TU100	BT-AG402	BTP-AA401	BTP-AA401
VDR600	ERZV14D621	ERZV14D621	TNR14V271K660

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

CV Board ✲ Mark List

	KV-PG21N70	KV-PG21P42/PG21P42/G/L/N
C712	560P	470P
C713	680P	560P
C714	680P	560P
C1760	100 16V	#
C1761	0.0047P 500V	#
C1763	33 160V	#
C1764	470 10V	#
C1768	0.047 200V :MPS	#
C1769	2.2 160V	#
C1770	0.1 200V	#
C1773	0.047 200V :MPS	#
C1775	470 10V	#
C1778	0.001 :MPS	#
C1779	0.001 :MPS	#
CN1701	3P	#
CN1702	3P	#
D1767	RD39ES-B2	#
D1768	RD39ES-B2	#
L710	33UH	10UH
L711	22UH	#
L712	22UH	#
L1700	47UH	#
L1761	47UH	#
Q1763	2SA1837	#
Q1767	2SC3733	#
Q1777	2SC2611	#
R1763	100	#
R1764	47 1/2W	#
R1765	560	#
R1769	2.2	#
R1772	18K	#
R1774	220 3W :RS	#
R1775	1K	#
R1776	18K	#
R1779	560	#
R1782	2.2	#
R1785	39	#
R1790	150 2W :RS	#
R1812	4.7K	#
R1851	10	#

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

5-4. VOLTAGE MEASUREMENT

A BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC001	1	4.9
	2	0
	3	0
	4	0
	5	4.9
	6	(0) [4.8]
	7	0
	8	0
	9	4.9
	10	4.8
	11	0
	12	0
	13	0
	14	4.8
	15	4.9
	16	0
	17	0
	18	0
	19	(0.3) [0]
	20	0
	21	0
	22	0
	23	0
	24	0
	25	0.3
	26	4.0
	27	0
	28	0
	29	0
	30	4.9
	31	4.9
	32	0
	33	(0) [4.9]
	34	(0) [2.3]
	35	2.2
	36	4.9
	37	0
	38	(3.2) [4.8]
	39	0
	40	4.9
	41	4.9
	42	0
	43	0.3
	44	4.9
	45	4.9
	46	4.9
	47	(0.3) [0]
	48	0
	49	0
	50	0
	51	0
	52	0
	53	4.9
	54	4.8
	55	4.9
	56	4.8
	57	4.9
	58	(1.9) [2.1]
	59	8.8
	60	(0.2) [8.8]
	61	0
	62	0
	63	4.9
	64	4.9
IC002	1	0
	2	(4.9) [0]
	3	(4.8) [0]
	4	(15.5) [0]
	5	(4.9) [0]
	6	0
	7	0
IC003	1	0
	2	0
	3	0
	4	0
	5	(4.9) [0]
	6	(4.9) [0]
	7	0
	8	(4.9) [1.0]
IC004	1	4.8
	2	3.9
	3	0
IC101	I	*
	G	*
	O	*
IC203	1	0
	2	0
	3	15.6
	4	0
	5	0
	6	0
	7	7.4
	8	1.0
	9	0
	10	(16.7) [0]
	11	(8.3) [16.7]
	12	(0) [8.3]
IC301	1	0.4
	2	3.7
	3	0
	4	0
	5	2.4
	6	(3.0) [1.5]
	7	4.8
	8	4.8
	9	6.6
	10	1.1
	11	3.4
	12	8.1
	13	(3.8) [3.3]
	14	0
	15	3
	16	0
	17	3.8
	18	7.6
	19	2.4
	20	2.3
	21	2.6
	22	0
	23	(0) [3.4]
	24	0
	25	0
	26	0
	27	2.7
	28	2.7
	29	2.3
	30	2.3
	31	2.3
	32	2.3
	33	0.3
	34	2.4
	35	2.4
	36	4.8
	37	8.1
	38	2.4
	39	4.9
	40	1.5
	41	0.6
	42	2.9
	43	(3.9) [4.4]
	44	0
	45	(3.1) [2.5]
	46	1.3
	47	1.4
	48	4.6
	49	4.6
	50	1.5
	51	3.6
	52	3.8
	53	(4.4) [5.7]
	54	(3.8) [0.2]
	55	(2.9) [0]
	56	3.4
IC400	1	0
	2	4.4
	3	8.9
	4	0
	5	0
	6	5.1
IC520	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	15.5
IC551	1	0.5
	2	13.3
	3	(12.1) [0]
	4	13.3
	5	(1.2) [0.3]
	6	13.5
	7	0.5
IC601	1	0.8
	2	(0.4) [1.3]
	3	(157) [171]
	4	11.0
	5	0
IC602	1	115
	2	(135) [0.01]
	3	(0) [135]
IC604	1	(0) [15.5]
	2	8.9
	3	0
	4	4.9
IC850	1	0.8
	2	0.8
	3	1.5
	4	0
	5	2.6
	6	1.6
	7	7.4
	8	8.9
IC1401	1	0
	2	0
	3	0
	4	0
	5	0
	6	0

A BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
PH600	1	134
	2	133
	3	3.6
	4	17.5
Q001	B	0
	C	4.9
	E	0
Q002	B	0
	C	4.9
	E	0
Q003	B	*
	C	*
	E	*
Q004	B	0.1
	C	4.9
	E	0.1
Q100	B	(8.1) [0.2]
	C	8.9
	E	(7.5) [0]
Q101	B	*
	C	*
	E	*
Q102	B	3.7
	C	8.9
	E	3.1
Q103	B	*
	C	*
	E	*
Q104	B	*
	C	*
	E	*
Q105	B	0.6
	C	(6.6) [0]
	E	0
Q106	B	0.6
	C	4.1
	E	0
Q200	B	0
	C	0
	E	0
Q201	B	6
	C	8.9
	E	5.3
Q202	B	0
	C	0
	E	0
Q203	B	0
	C	0
	E	0
Q300	B	*
	C	*
	E	*
Q302	B	*
	C	*
	E	*
Q303	B	*
	C	*
	E	*
Q304	B	*
	C	*
	E	*

Ref	Pin No	Voltage[v]
Q307	B	(2.9) [1.5]
	C	8.9
	E	(2.3) [0.9]
Q308	B	*
	C	*
	E	*
Q309	B	2.9
	C	0
	E	0
Q310	B	*
	C	*
	E	*
Q313	B	*
	C	*
	E	*
Q314	B	4
	C	0
	E	0
Q315	B	0
	C	8.9
	E	2.2
Q316	B	0
	C	0
	E	0
Q318	B	2.9
	C	6
	E	2.4
Q319	B	0
	C	8.1
	E	0
Q400	B	15.5
	C	0
	E	15.5
Q401	B	0
	C	0
	E	0
Q402	B	0
	C	0
	E	0
Q403	B	0.3
	C	0
	E	0
Q404	B	4.5
	C	0
	E	5.2
Q405	B	2.4
	C	8.9
	E	1.8
Q406	B	2.4
	C	(4.1) [5.0]
	E	1.8
Q407	B	5.0
	C	8.9
	E	4.3
Q408	B	3.5
	C	8.9
	E	2.9
Q409	B	0
	C	0
	E	0
Q500	B	133.5
	C	0
	E	133.5

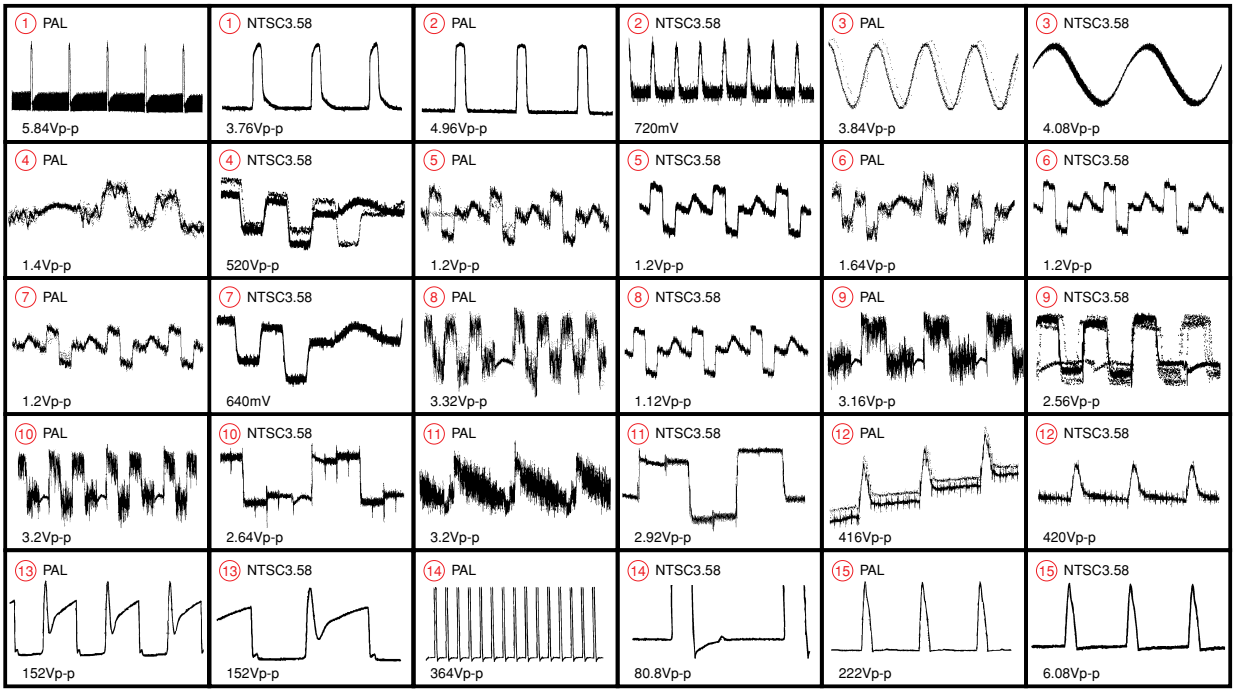
Ref	Pin No	Voltage[v]
Q800	B	0.1
	C	51.6
	E	0
Q801	B	0
	C	0
	E	0
Q802	B	(6.0) [-94.3]
	C	7
	E	0
Q850	B	7.4
	C	8.9
	E	7.0
Q851	B	7.4
	C	0
	E	7.0
Q852	B	6.7
	C	8.9
	E	6.1
Q853	B	0.3
	C	6.9
	E	0
Q854	B	0.9
	C	0.8
	E	0
Q922	B	*
	C	*
	E	*
Q923	B	*
	C	*
	E	*
Q924	B	*
	C	*
	E	*
Q954	B	*
	C	*
	E	*
Q956	B	*
	C	*
	E	*
Q961	B	*
	C	*
	E	*
Q962	B	*
	C	*
	E	*
Q966	B	*
	C	*
	E	*
SWF100	1	0
	2	0
	3	0
	4	4.7
	5	4.7

CV BOARD VOLTAGE LIST

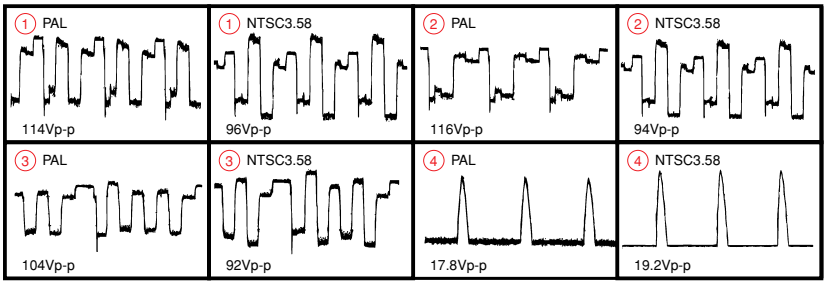
Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
J701	G2	(135) [142]	Q706	B	8.9	Q711	B	2.3
	G1-1	0		C	(128) [132]		C	8.3
	H1	0		E	8.3		E	1.6
	H2	0	Q707	B	136	Q712	B	2.6
	G1-2	0		C	7.6		C	8.3
	KB	133		E	132		E	1.9
	KG	(125) [145]	Q708	B	(143) [146]	Q1763	B	0
	KR	129		C	7.0		C	0
	G1-3	0		E	144		E	0
	E	0	Q709	B	(127) [131]	Q1765	B	0
Q705	B	8.9		C	7.0		C	0
	C	(144) [148]		E	128		E	0
	E	8.3	Q710	B	2.5	Q1767	B	0
Q704	B	8.9		C	8.3		C	0
	C	137		E	1.8		E	0
	E	8.3				Q1777	B	0
							C	0
							E	0

5-5. WAVEFORMS

A BOARD WAVEFORM



CV BOARD WAVEFORM

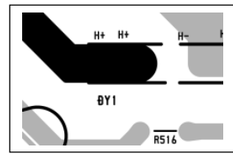


KV-PG21P42/G/L/N/PG21N70 RM-952 RM-915

5-6. PRINTED WIRING BOARDS AND PARTS LOCATION

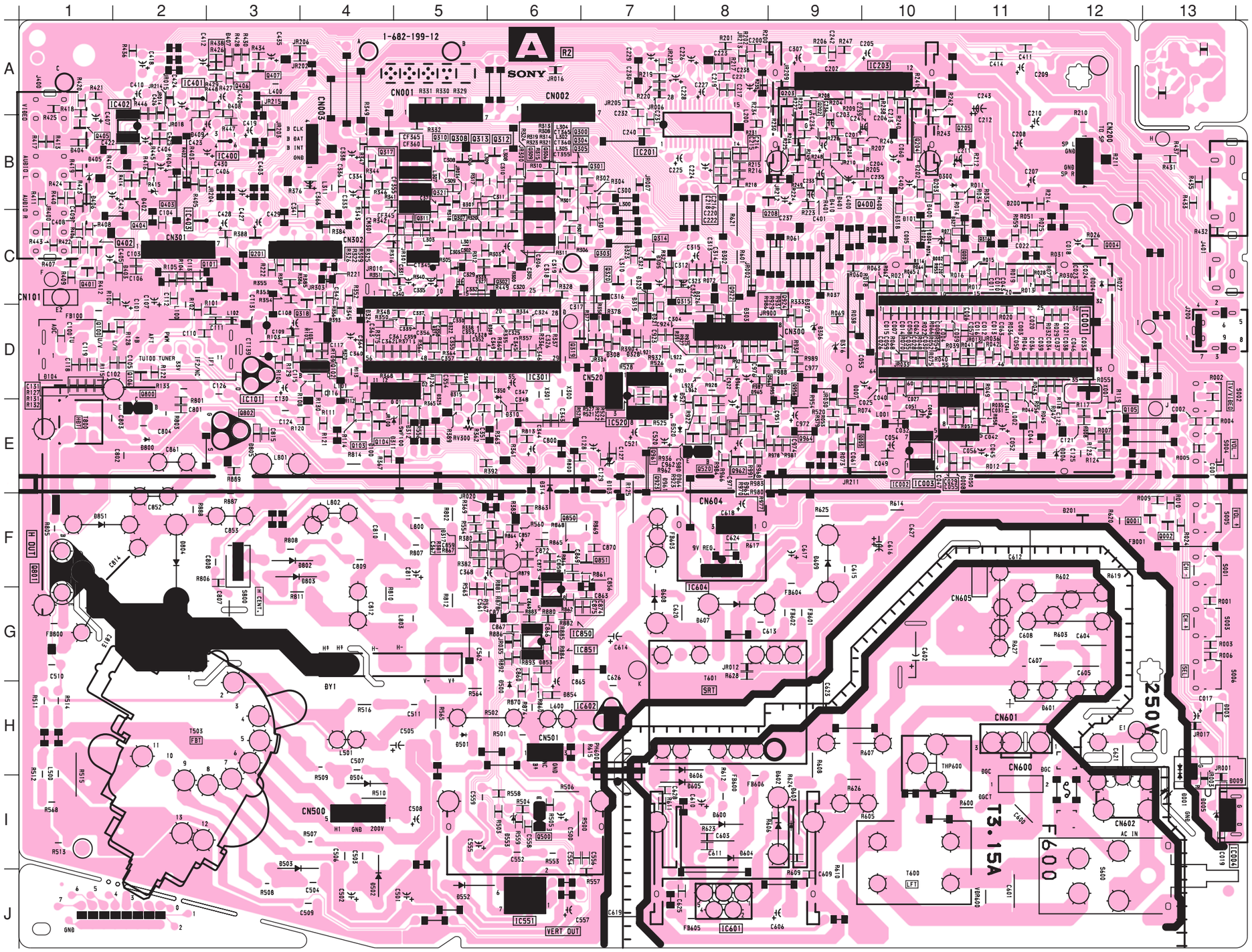
PRINTED WIRING BOARDS

A [POWER SUPPLY,DEFLECTION,
AUDIO AND VIDEO PROCESSING,
AUDIO/VIDEO INPUT/OUTPUT AND MICROCOMPUTER]



NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.

– A Board –



A BOARD

IC

IC001	D-12
IC002	F10
IC003	F10
IC004	I-13
IC201	B-7
IC203	A-10
IC301	D-6
IC400	B-3
IC401	A-2
IC402	A-2
IC403	C-2
IC520	E-7
IC551	J-6
IC601	J-8
IC602	H-6
IC604	G-8
IC850	G-6
IC851	G-6
PH600	H-7

TRANSISTOR

Q001	F-12
Q002	F-13
Q003	C-11
Q004	C-12
Q005	E-9
Q100	D-1
Q101	C-2
Q102	D-4
Q103	E-4
Q104	E-4
Q105	E-12
Q106	D-2
Q201	C-3
Q202	A-9
Q203	A-9
Q204	B-10
Q205	B-11
Q300	B-6
Q301	B-7
Q302	C-6
Q303	C-7
Q304	B-6
Q305	B-6
Q306	B-6
Q307	C-5
Q308	B-5
Q309	B-6
Q310	B-5
Q311	C-5
Q312	B-6
Q313	B-5
Q314	C-7
Q315	C-8
Q316	C-11
Q317	B-4
Q318	D-4
Q319	D-6
Q320	C-7
Q321	B-5
Q400	C-10
Q401	C-1
Q402	C-2
Q403	B-2
Q404	C-2
Q405	B-1
Q406	A-3
Q407	A-3
Q500	I-6
Q520	E-8
Q800	D-2
Q801	F-1
Q802	E-3
Q850	F-6
Q851	F-7
Q922	C-8
Q923	E-7
Q924	C-9
Q956	D-9
Q961	E-7
Q962	E-8
Q964	E-9

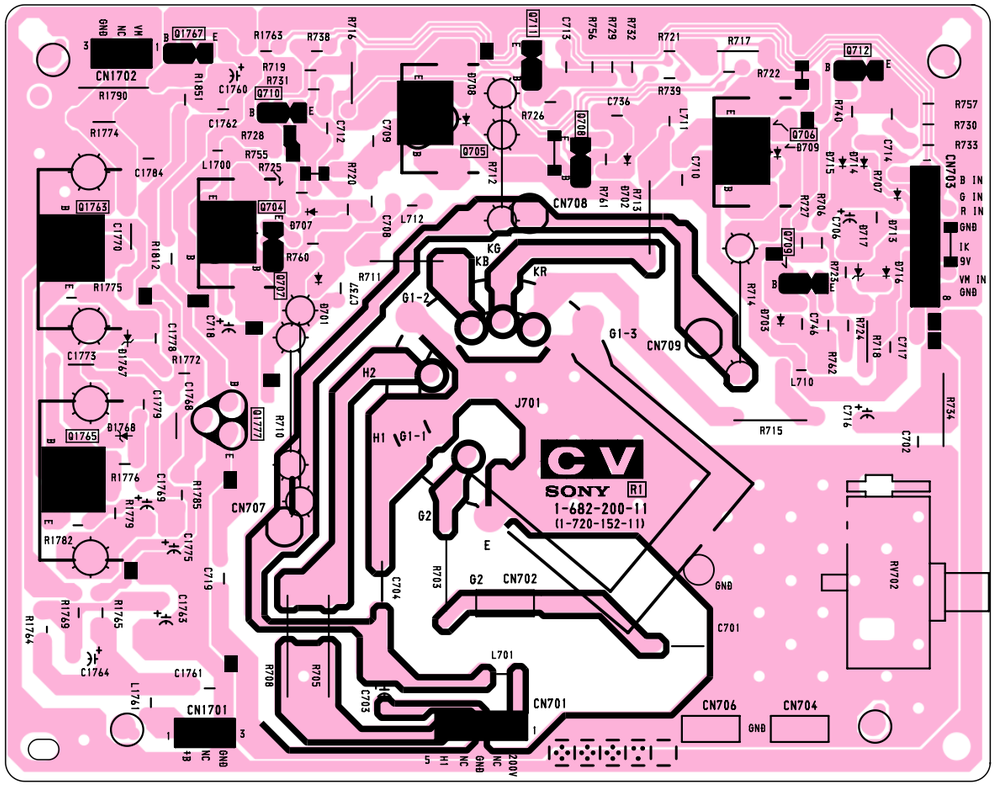
DIODE

D001	I-13
D002	C-10
D003	H-13
D004	C-12
D005	I-13
D006	E-12
D007	D-9
D008	E-11
D009	I-13
D100	E-4
D101	C-10
D102	C-10
D103	E-7
D104	D-1
D200	B-11
D201	F-12
D202	B-10
D203	B-10
D300	B-10
D301	B-5
D302	C-8
D303	D-8
D304	C-10
D305	C-7
D306	D-9
D308	D-7
D309	D-6
D310	E-6
D311	E-4
D312	E-5
D314	E-6
D315	D-5
D316	D-9
D317	F-5
D318	C-10
D319	C-7
D320	C-7
D321	D-7
D323	C-7
D324	D-4
D325	D-5
D326	C-8
D327	C-10
D400	B-10
D401	B-9
D402	B-2
D403	C-2
D404	B-1
D405	B-1
D406	B-1
D407	A-3
D408	A-3
D409	B-2
D410	B-9
D500	H-6
D501	H-5
D502	J-4
D503	I-3
D504	I-4
D520	E-7
D521	D-8
D552	J-5
D553	I-6
D600	I-8
D601	H-11
D602	I-9
D603	I-9
D604	I-8
D605	I-8
D606	I-8
D607	G-8
D608	G-7
D609	F-9
D800	E-2
D802	F-4
D803	F-4
D804	F-2
D805	E-3
D851	F-1
D853	G-6
D961	E-7
D965	D-8
D966	D-8

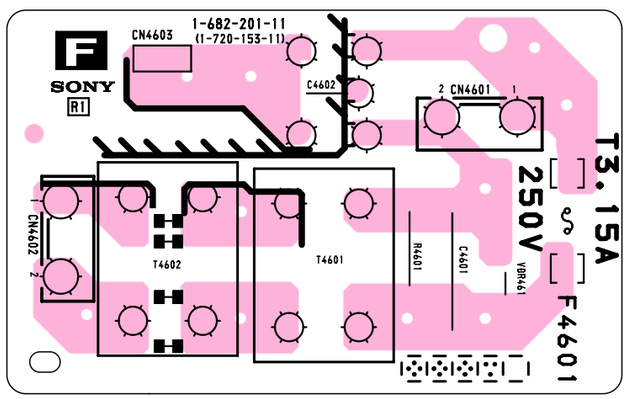
PRINTED WIRING BOARDS

CV [RGB AMPLIFER] **F** [CISPR]

– CV Board –

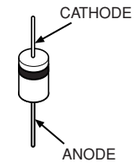
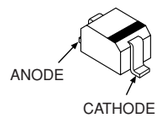
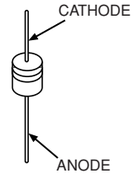
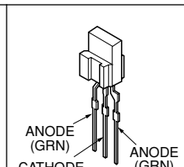
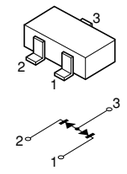


– F Board – (KV-PG21N70) (TAIWAN ONLY)

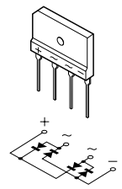
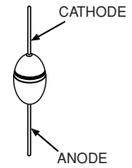
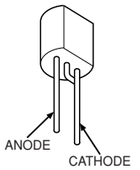
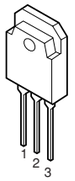
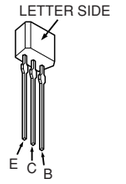


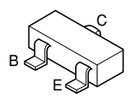
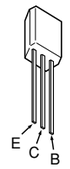
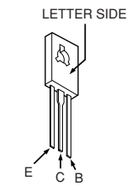
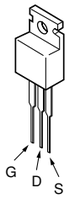
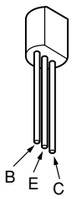
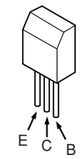
5-7. SEMICONDUCTORS

DIODE

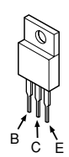
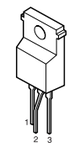
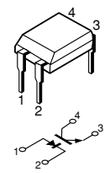
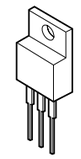
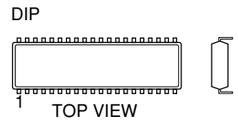
					
D1NL20U D356M-F ELIZ EG01CV1 HZS361-TE GPO8D	EGP20G NNCD8.2A-T1 NNCD9.1A-T1 RU4AM-T3 1SS119-25	MA113-TX RD5.6ESB2 RD5.1SB-T2 UDZSTE-179.1B UDZSTE-175.1B 1SS355TE-17	RD2.2ES-B2 RD5.1ESB2 RD15ES-B1 S3L20UF4 RD13SB2 RD39ES-B2	SPB-25MVWF	DA204K

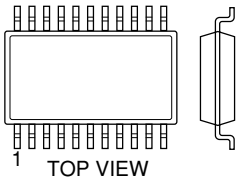
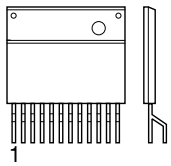
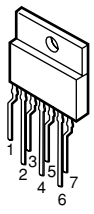
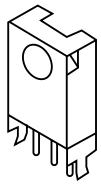
TRANSISTOR

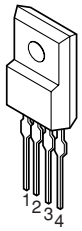
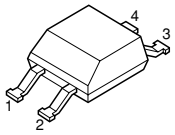
					
D3SB60F3	BY228	UPC574J	RN4Z	2SD2624-CA	2SC2785-HFE

					
MSD601-RT1 MSB709-RT1 UN2211 UN2213 UN2216 2SA1162-G	2SA1091-0	2SC2611	IRF614-005	2SC3779C	2SC3209LK 2SC3733

IC

				
2SA1837 2SC4793	SE-135N	ON3171-R	TA7805S	M24C08-BN6 (A)(8 PIN) CXP85224A-081S CXP85224A-083S

SOP  TOP VIEW Small Outline L-Leaded Pin 8~98	MARKING SIDE VIEW  Zig-zag In -line Package Pin 6~99	 	
MM1319AFBE NJM2903M	STR-F6707A TDA8843	AN5522	SBX3081-21 SBX1981-51RP

 	
PQO9RD11	PC123F2

SECTION 6
EXPLODED VIEWS

NOTE:

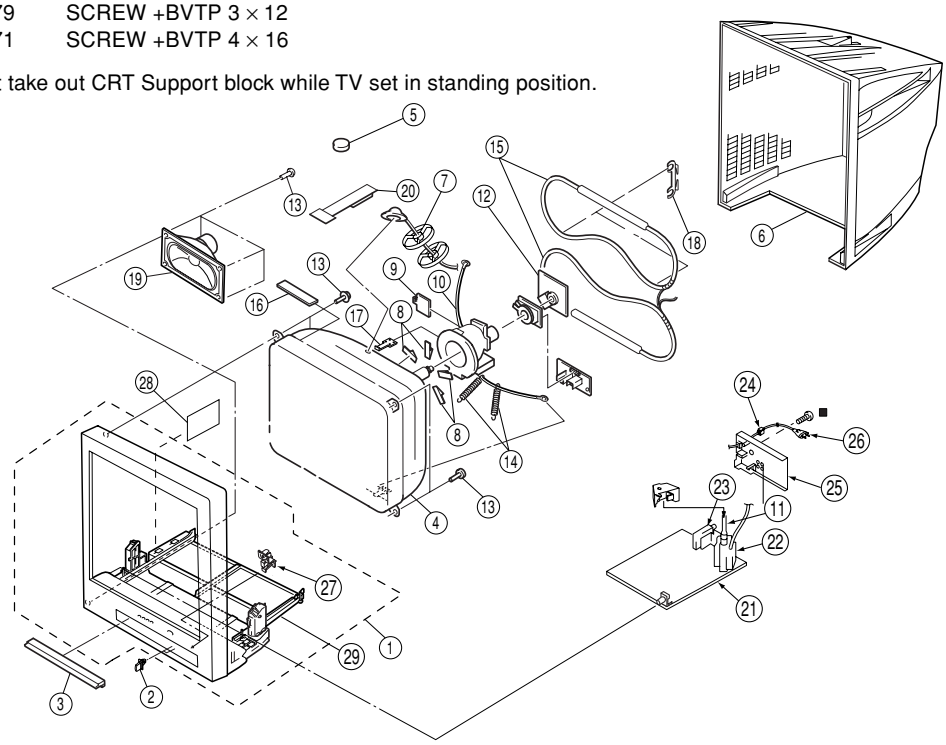
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. PICTURE TUBE AND CHASSIS

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16

Caution : Do not take out CRT Support block while TV set in standing position.



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4039-583-1	BEZNET ASSY (KV-PG21N70)	27
		X-4039-610-1	BEZNET ASSY (KV-PG21P42)	
		X-4039-645-1	BEZNET ASSY (KV-PG21P42/G)	
		X-4039-643-1	BEZNET ASSY (KV-PG21P42/L)	
		X-4039-647-1	BEZNET ASSY (KV-PG21P42/N)	
2		4-081-868-01	BUTTON POWER	
3		X-4039-582-1	DOOR ASSY CONTROL (KV-PG21N70)	
		X-4039-547-1	DOOR ASSY CONTROL (KV-PG21P42)	
		X-4039-593-1	DOOR ASSY CONTROL (KV-PG21P42/G)	
		X-4039-592-1	DOOR ASSY CONTROL (KV-PG21P42/L)	
		X-4039-594-1	DOOR ASSY CONTROL (KV-PG21P42/N)	
4	⚠	8-738-809-05	PICTURE TUBE (A51LPT70X) (KV-PG21N70)	
	⚠	8-738-812-05	PICTURE TUBE (A51LPT70X) (KV-PG21P42)	
5		1-452-032-00	MAGNET DISC	
6		4-081-866-01	COVER REAR (KV-PG21N70)	
		4-085-438-01	COVER REAR (KV-PG21P42/G/L/N)	
7	*	3-704-372-11	HOLDER HV CABLE	
8		4-046-600-11	SPACER DY (KV-PG21N70)	
		4-064-818-01	SPACER DY (KV-PG21P42/G/L/N)	
9		4-057-714-01	PIECE TLH CONVERGENCE	
10	⚠	8-451-505-11	DEFLECTION YOKE (Y21RSA-S)	
11		1-900-212-58	LEAD ASSY FOCUS	
12	*	A-1332-257-A	CV BOARD MOUNTED (KV-PG21N70)	
	*	A-1332-245-A	CV BOARD MOUNTED (KV-PG21P42/G/L/N)	
13		4-365-808-01	SCREW (5) TAPPING (KV-PG21N70)	
		4-365-808-41	SCREW (5) TAPPING (KV-PG21P42/G/L/N)	
14		4-078-765-01	SPRING EXTENSION (KV-PG21N70)	
		4-078-765-11	SPRING EXTENSION (KV-PG21P42/G/L/N)	
15	⚠	1-416-946-11	COIL DEMAGNETIC (KV-PG21N70 (PHILLIPINES))	
	⚠	1-416-946-31	COIL DEMAGNETIC (KV-PG21N70 (TAIWAN))	
	⚠	1-419-479-51	COIL DEGAUSSING (KV-PG21P42/G/L/N)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
16		4-069-652-02	CUSHION (HS BAND) (KV-PG21N70)	
		4-069-652-11	CUSHION (HS BAND) (KV-PG21P42)	
17		4-034-272-11	PLATE CORRECTION TLV	
18		4-064-883-03	HOLDER DGC	
		4-064-883-21	HOLDER DGC (KV-PG21P42 ONLY)	
19		1-505-547-21	SPEAKER (5X9 CM)	
20		4-051-736-42	PIECE A (90) CONV CORRECT	
21	*	A-1299-642-A	A BOARD COMPLETE (KV-PG21N70 (PHILLIPINES))	
	*	A-1300-095-A	A BOARD COMPLETE (KV-PG21N70 (TAIWAN))	
	*	A-1299-648-A	A BOARD COMPLETE (KV-PG21P42/G/L/N)	
22	⚠	1-453-329-21	TRANSFORMER ASSY FLY BACK (NX-4751//M3A4)	
23		8-598-590-00	TUNER BT-AG401 (KV-PG21N70)	
		8-598-591-00	TUNER BT-AG402 (KV-PG21P42)	
24		4-022-115-00	HOLDER AC CORD (KV-PG21N70)	
		4-022-115-21	HOLDER AC CORD (KV-PG21P42/G/L/N)	
25	*	4-059-710-31	BRACKET TERMINAL BOARD (KV-PG21N70)	
		4-059-716-01	BRACKET TERMINAL BOARD (KV-PG21P42/G/L/N)	
26	⚠	1-575-023-11	CORD POWER WITH CONNECTOR (KV-PG21N70)	
	⚠	1-575-023-31	CORD POWER WITH CONNECTOR (EXCEPT PG21N70)	
27	*	4-081-867-01	BAR OPTICAL (KV-PG21N70)-5	
	*	4-085-440-01	BAR OPTICAL (KV-PG21P42/G/L/N)	
28	*	A-1400-175-A	F BOARD MOUNTED (KV-PG21N70 (TAIWAN ONLY))	
29	*	4-085-490-01	BRACKET PWB (KV-PG21P42/G/L/N)	

SECTION 7
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

REF NO.	PART NO.	DESCRIPTION	REMARK
	* A-1299-648-A	A BOARD COMPLETE (KV-PG21P42/PG21P42/G/L/N)	
	* A-1299-642-A	A BOARD COMPLETE (KV-PG21N70(PHILIPPINES))	
	* A-1300-095-A	A BOARD COMPLETE (KV-PG21N70(TAIWAN))	
		**********	
	* 4-055-304-01	HOLDER, LED	
	4-082-405-01	HOLDER, FBT	
	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE (KV-PG21N70(PHILIPPINES/TAIWAN))	
	4-382-854-01	SCREW (M3X8), P, SW (+)	
	4-382-854-21	SCREW (M3X14), P, SW (+)	
	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
		<CAPACITOR>	
C001	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V	
C002	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V	
C004	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C005	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C006	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C007	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C009	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C010	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C011	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C012	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C013	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C014	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C015	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C016	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C018	1-126-961-11	ELECT 2.2UF 20.00% 50V	
C019	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V	
C020	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C021	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C022	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C023	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C024	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C025	1-135-834-91	CERAMIC CHIP 2.2E+06PF 6.3V	
C026	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C027	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C028	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C029	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C030	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C031	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C032	1-162-965-11	CERAMIC CHIP 0.0015UF 10.00% 50V	
C033	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C034	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C035	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C036	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C036	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C037	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C038	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C039	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C039	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C041	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V	
C042	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C043	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C044	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V	
C045	1-126-962-11	ELECT 3.3UF 20.00% 50V	
C046	1-162-995-11	CERAMIC CHIP 0.022UF 50V	
C047	1-113-619-11	CERAMIC CHIP 0.47UF 10V	
C048	1-126-965-91	ELECT 22UF 20.00% 50V	
C049	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C049	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C050	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C051	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C051	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C052	1-126-935-11	ELECT 470UF 20.00% 10V	
C053	1-126-935-11	ELECT 470UF 20.00% 10V	
C054	1-104-666-11	ELECT 220UF 20.00% 25V	
C055	1-162-960-11	CERAMIC CHIP 220PF 10.00% 50V	
C056	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C057	1-162-960-11	CERAMIC CHIP 220PF 10.00% 50V	
C058	1-162-960-11	CERAMIC CHIP 220PF 10.00% 50V	
C061	1-162-966-11	CERAMIC CHIP 0.0022UF 10.00% 50V	
C063	1-162-923-11	CERAMIC CHIP 47PF 5.00% 50V	
C064	1-126-947-11	ELECT 47UF 20.00% 16V	
C100	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C101	1-126-964-11	ELECT 10UF 20.00% 50V	
C102	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C103	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C104	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C105	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C106	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V	
C107	1-126-935-11	ELECT 470UF 20.00% 16V	
C108	1-126-767-11	ELECT 1000UF 20.00% 16V	
C109	1-163-017-00	CERAMIC CHIP 0.0047UF 10.00% 50V	
C111	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	

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REF NO.	PART NO.	DESCRIPTION	REMARK
C115	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C115	1-410-993-42	INDUCTOR 1UH (KV-PG21N70(PHILIPPINES/TAIWAN))	
C116	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V	
C117	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V	
C121	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C122	1-162-915-11	CERAMIC CHIP 10PF 0.50PF 50V	
C124	1-130-493-00	MYLAR 0.068UF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C125	1-130-495-00	MYLAR 0.1UF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C126	1-130-493-00	MYLAR 0.068UF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C127	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C128	1-126-965-91	ELECT 22UF 20.00% 50V	
C129	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	
C130	1-126-933-11	ELECT 100UF 20.00% 16V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C131	1-162-966-11	CERAMIC CHIP 0.0022UF 10.00% 50V	
C200	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	
C202	1-136-167-00	FILM 0.15UF 5.00% 50V	
C205	1-126-961-11	ELECT 2.2UF 20.00% 50V	
C206	1-126-965-91	ELECT 22UF 20.00% 50V	
C209	1-126-942-61	ELECT 1000UF 20.00% 25V	
C210	1-128-551-11	ELECT 22UF 20.00% 25V	
C212	1-126-942-61	ELECT 1000UF 20.00% 25V	
C213	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	
C242	1-164-227-11	CERAMIC CHIP 0.022UF 10.00% 25V (KV-PG21P42/PG21P42/G/L/N)	
C242	1-163-037-11	CERAMIC CHIP 0.022UF 10.00% 50V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C300	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C301	1-162-920-11	CERAMIC CHIP 27PF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C302	1-162-923-11	CERAMIC CHIP 47PF 5.00% 50V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C303	1-162-925-11	CERAMIC CHIP 68PF 5.00% 50V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C304	1-119-662-91	CERAMIC CHIP 150PF 1.00% 50V	
C305	1-126-933-11	ELECT 100UF 20.00% 16V	
C306	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V	
C307	1-126-957-11	ELECT 0.22UF 20.00% 50V	
C308	1-164-392-11	CERAMIC CHIP 390PF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C310	1-164-392-11	CERAMIC CHIP 390PF 5.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C311	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C312	1-162-916-11	CERAMIC CHIP 12PF 5.00% 50V	
C315	1-126-961-11	ELECT 2.2UF 20.00% 50V	
C317	1-216-295-91	SHORT 0	
C318	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C318	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C319	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C319	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C320	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C320	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C321	1-126-963-11	ELECT 4.7UF 20.00% 50V	
C323	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C327	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C327	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C328	1-165-128-11	CERAMIC CHIP 0.22UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C328	1-164-222-91	CERAMIC CHIP 0.22UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C329	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C329	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C330	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C330	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C332	1-126-933-11	ELECT 100UF 20.00% 16V	
C335	1-126-947-11	ELECT 47UF 20.00% 16V	
C337	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C337	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C339	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C339	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C341	1-113-619-11	CERAMIC CHIP 0.47UF 10V	
C342	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C342	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C343	1-162-917-11	CERAMIC CHIP 15PF 5.00% 50V	
C344	1-162-917-11	CERAMIC CHIP 15PF 5.00% 50V	
C345	1-162-967-11	CERAMIC CHIP 0.0033UF 10.00% 50V	
C346	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C346	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C347	1-126-933-11	ELECT 100UF 20.00% 16V	
C348	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C348	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C349	1-164-346-11	CERAMIC CHIP 1UF 16V	
C352	1-162-966-11	CERAMIC CHIP 0.0022UF 10.00% 50V	
C353	1-125-891-11	CERAMIC CHIP 0.47UF 10.00% 10V (KV-PG21P42/PG21P42/G/L/N)	
C353	1-107-823-11	CERAMIC CHIP 0.47UF 10.00% 16V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C354	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V	
C355	1-125-891-11	CERAMIC CHIP 0.47UF 10.00% 10V (KV-PG21P42/PG21P42/G/L/N)	
C355	1-107-823-11	CERAMIC CHIP 0.47UF 10.00% 16V (KV-PG21N70(PHILIPPINES/TAIWAN))	
C356	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	
C357	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C358	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C359	1-164-360-11	CERAMIC CHIP 0.1UF 16V (KV-PG21P42/PG21P42/G/L/N)	
C359	1-163-038-91	CERAMIC CHIP 0.1UF 25V (KV-PG21N70(PHILIPPINES/TAIWAN))	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.		PART NO.	DESCRIPTION		REMARK
C360		1-130-495-00	MYLAR	0.1UF 5.00%	50V
C361		1-135-834-91	CERAMIC CHIP	2.2E+06PF	6.3V
C362		1-113-619-11	CERAMIC CHIP	0.47UF	10V
C363		1-162-968-11	CERAMIC CHIP	0.0047UF 10.00%	50V
C364		1-126-964-11	ELECT	10UF 20.00%	50V
C366		1-126-933-11	ELECT	100UF 20.00%	16V
C369		1-137-194-81	FILM	0.47UF 5.00%	50V
C370		1-216-295-91	SHORT	0	
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C400		1-126-934-11	ELECT	220UF 20.00%	16V
C405		1-126-960-11	ELECT	1UF 20.00%	50V
C406		1-115-156-11	CERAMIC CHIP	1UF	10V
C407		1-126-934-11	ELECT	220UF 20.00%	16V
C409		1-164-360-11	CERAMIC CHIP	0.1UF	16V
			(KV-PG21P42/PG21P42/G/L/N)		
C409		1-163-038-91	CERAMIC CHIP	0.1UF	25V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C410		1-126-933-11	ELECT	100UF 20.00%	16V
C412		1-128-551-11	ELECT	22UF 20.00%	25V
C414		1-164-360-11	CERAMIC CHIP	0.1UF	16V
			(KV-PG21P42/PG21P42/G/L/N)		
C414		1-163-038-91	CERAMIC CHIP	0.1UF	25V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C418		1-126-933-11	ELECT	100UF 20.00%	16V
C419		1-126-964-11	ELECT	10UF 20.00%	50V
C421		1-126-964-11	ELECT	10UF 20.00%	50V
C422		1-126-964-11	ELECT	10UF 20.00%	50V
C425		1-162-927-11	CERAMIC CHIP	100PF 5.00%	50V
C430		1-126-964-11	ELECT	10UF 20.00%	50V
C435		1-126-934-11	ELECT	220UF 20.00%	16V
C500		1-126-933-11	ELECT	100UF 20.00%	16V
C501		1-104-666-11	ELECT	220UF 20.00%	25V
C502		1-104-666-11	ELECT	220UF 20.00%	25V
C503		1-162-318-11	CERAMIC	0.001UF 10.00%	500V
C504		1-162-318-11	CERAMIC	0.001UF 10.00%	500V
C505		1-123-024-21	ELECT	33UF	160V
C507		1-102-228-00	CERAMIC	470PF 10.00%	500V
C508		1-107-654-11	ELECT	33UF 20.00%	250V
C509		1-106-379-12	MYLAR	0.033UF 10.00%	200V
C510		1-137-150-11	MYLAR	0.01UF 10.00%	100V
C552		1-137-194-81	FILM	0.47UF 5.00%	50V
C554		1-164-361-11	CERAMIC CHIP	0.047UF	25V
			(KV-PG21P42/PG21P42/G/L/N)		
C554		1-163-035-00	CERAMIC CHIP	0.047UF	50V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C555		1-126-949-11	ELECT	220UF 20.00%	35V
C556		1-164-360-11	CERAMIC CHIP	0.1UF	16V
			(KV-PG21P42/PG21P42/G/L/N)		
C556		1-163-038-91	CERAMIC CHIP	0.1UF	25V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C557		1-126-948-11	ELECT	100UF 20.00%	35V
C558		1-162-964-11	CERAMIC CHIP	0.001UF 10.00%	50V
C559		1-106-220-00	MYLAR	0.1UF 10.00%	100V
C561		1-162-968-11	CERAMIC CHIP	0.0047UF 10.00%	50V
C562		1-106-220-00	MYLAR	0.1UF 10.00%	100V
C600		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C601	⚠	1-115-165-11	FILM	0.1UF 20.00%	275V
C602		1-117-752-11	ELECT(BLOCK)	330UF 20.00%	450V
			(KV-PG21P42/PG21P42/G/L/N/		
			PG21N70(PHILIPPINES))		
C602		1-117-894-11	ELECT	560UF 20.00%	250V
			(KV-PG21N70(TAIWAN))		

REF NO.		PART NO.	DESCRIPTION		REMARK
C603		1-117-623-11	FILM	1500PF 3.00%	1.2KV
C604		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C605		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C606		1-104-666-11	ELECT	220UF 20.00%	25V
C607		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C608		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C609		1-162-962-11	CERAMIC CHIP	470PF 10.00%	50V
C610		1-126-948-11	ELECT	100UF 20.00%	35V
C611		1-163-145-00	CERAMIC CHIP	0.0015UF 5.00%	50V
C612	⚠	1-119-886-51	CERAMIC	470PF 10.00%	250V
C614		1-123-024-21	ELECT	33UF	160V
C615		1-102-228-00	CERAMIC	470PF 10.00%	500V
C616		1-126-943-11	ELECT	2200UF 20.00%	25V
C617		1-126-967-11	ELECT	47UF 20.00%	50V
C618		1-126-933-11	ELECT	100UF 20.00%	16V
C619	⚠	1-119-886-51	CERAMIC	470PF 10.00%	250V
C620		1-162-134-11	CERAMIC	470PF 10.00%	2KV
C621		1-117-703-11	CERAMIC	0.0047UF 99%	250V
			(KV-PG21P42/PG21P42/G/L/N)		
C626		1-106-383-00	MYLAR	0.047UF 10.00%	200V
C628		1-162-962-11	CERAMIC CHIP	470PF 10.00%	50V
C800		1-126-960-11	ELECT	1UF 20.00%	50V
C801		1-162-964-11	CERAMIC CHIP	0.001UF 10.00%	50V
C802		1-106-375-12	MYLAR	0.022UF 99%	200V
C803		1-102-244-00	CERAMIC	220PF 10.00%	500V
C804		1-162-318-11	CERAMIC	0.001UF 10.00%	500V
C807		1-162-115-00	CERAMIC	330PF 10.00%	2KV
C808		1-106-365-00	MYLAR	0.0082UF 10.00%	200V
C809		1-107-364-11	MYLAR	0.01UF 10.00%	200V
C810		1-106-375-12	MYLAR	0.022UF 99%	200V
C811		1-107-957-11	ELECT	1UF 20.00%	250V
C812		1-117-665-11	FILM	0.33UF 5.00%	250V
C813		1-162-115-00	CERAMIC	330PF 10.00%	2KV
C814		1-117-646-11	FILM	12000PF 3.00%	1.2KV
C852		1-107-846-11	FILM	0.1UF 5.00%	250V
C856		1-162-964-11	CERAMIC CHIP	0.001UF 10.00%	50V
C857		1-126-964-11	ELECT	10UF 20.00%	50V
C858		1-162-974-11	CERAMIC CHIP	0.01UF	50V
C859		1-162-974-11	CERAMIC CHIP	0.01UF	50V
C860		1-208-834-11	METAL CHIP	150K 0.5%	1/10W
C861		1-130-202-00	FILM	0.022UF 5.00%	400V
C863		1-216-295-91	SHORT	0	
C865		1-126-933-11	ELECT	100UF 20.00%	16V
C866		1-162-974-11	CERAMIC CHIP	0.01UF	50V
C867		1-162-966-11	CERAMIC CHIP	0.0022UF 10.00%	50V
C868		1-162-995-11	CERAMIC CHIP	0.022UF	50V
C869		1-164-156-11	CERAMIC CHIP	0.1UF	25V
			(KV-PG21P42/PG21P42/G/L/N)		
C869		1-115-339-11	CERAMIC CHIP	0.1UF 10.00%	50V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C870		1-162-960-11	CERAMIC CHIP	220PF 10.00%	50V
C872		1-164-360-11	CERAMIC CHIP	0.1UF	16V
			(KV-PG21P42/PG21P42/G/L/N)		
C872		1-163-038-91	CERAMIC CHIP	0.1UF	25V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C873		1-162-974-11	CERAMIC CHIP	0.01UF	50V
C874		1-162-974-11	CERAMIC CHIP	0.01UF	50V
C875		1-164-360-11	CERAMIC CHIP	0.1UF	16V
			(KV-PG21P42/PG21P42/G/L/N)		
C875		1-163-038-91	CERAMIC CHIP	0.1UF	25V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		
C922		1-162-962-11	CERAMIC CHIP	470PF 10.00%	50V
			(KV-PG21N70(PHILIPPINES/TAIWAN))		

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REF NO.	PART NO.	DESCRIPTION	REMARK
C924	1-162-921-11	CERAMIC CHIP 33PF 5.00% 50V	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
C951	1-162-974-11	CERAMIC CHIP 0.01UF 50V	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
C971	1-126-964-11	ELECT 10UF 20.00% 50V	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
C972	1-126-933-11	ELECT 100UF 20.00% 16V	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
C976	1-126-964-11	ELECT 10UF 20.00% 50V	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
C980	1-126-964-11	ELECT 10UF 20.00% 50V	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
		<FILTER>	
CF345	1-234-684-21	FILTER, BAND PASS (F4.5C)	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
CF355	1-234-686-21	FILTER, BAND PASS (F5.5C)	
		(KV-PG21P42/PG21P42/G/L/N)	
CF365	1-234-693-21	FILTER, BAND PASS (F5.74B)	
		(KV-PG21P42/PG21P42/G/L/N)	
		<######### >	
CLP001	4-352-844-01	PIN, LEAD, COATING	
CLP002	4-352-844-01	PIN, LEAD, COATING	
CLP003	4-352-844-01	PIN, LEAD, COATING	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
		<CONNECTOR>	
CN003	* 1-508-797-00	PIN, CONNECTOR 4P	
CN101	1-695-915-11	TAB (CONTACT)	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
CN200	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN300	* 1-564-509-11	PLUG, CONNECTOR 6P	
		(KV-PG21P42/PG21P42/G/L/N)	
CN300	* 1-564-511-11	PLUG, CONNECTOR 8P	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
CN500	* 1-564-508-11	PLUG, CONNECTOR 5P	
CN501	* 1-564-506-11	PLUG, CONNECTOR 3P	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
CN600	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
CN601	* 1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN602	1-580-843-11	PIN, CONNECTOR (POWER)	
		<TRIMMER>	
CT131	1-767-774-22	TRAP, CERAMIC	
		(KV-PG21P42/PG21P42/G/L/N)	
CT139	1-767-775-22	TRAP, CERAMIC	
		(KV-PG21P42/PG21P42/G/L/N)	
CT345	1-795-342-21	TRAP, CERAMIC (T4.5C)	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
CT355	1-795-343-21	TRAP, CERAMIC (T55B)	
		(KV-PG21P42/PG21P42/G/L/N)	
CT365	1-795-343-21	TRAP, CERAMIC (T55B)	
		(KV-PG21P42/PG21P42/G/L/N)	
		<DIODE>	
D001	8-719-083-18	DIODE SPB-25MVWF	
D004	8-719-911-19	1SS119-25	
D005	8-719-109-85	RD5.1ESB2	

REF NO.	PART NO.	DESCRIPTION	REMARK
D007	8-719-069-54	UDZSTE-175.1B	
		(KV-PG21P42/PG21P42/G/L/N)	
D007	8-719-159-10	RD5.1SB-T2	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
D009	8-719-069-54	UDZSTE-175.1B	
		(KV-PG21P42/PG21P42/G/L/N)	
D009	8-719-159-10	RD5.1SB-T2	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
D103	8-759-157-40	UPC574J	
D104	8-719-914-42	DA204K	
D200	8-719-914-42	DA204K	
D202	8-719-988-61	1SS355TE-17	
D203	8-719-988-61	1SS355TE-17	
D301	8-719-988-61	1SS355TE-17	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
D304	8-719-063-66	HZS361-TE	
D305	8-719-988-61	1SS355TE-17	
D306	8-719-109-54	RD2.2ES-B2	
D307	8-719-988-61	1SS355TE-17	
D308	8-719-988-61	1SS355TE-17	
D309	8-719-069-60	UDZSTE-179.1B	
D310	8-719-911-19	1SS119-25	
D310	8-719-991-33	1SS133T-77	
D311	8-719-070-15	NNCD8.2A-T1	
D312	8-719-069-60	UDZSTE-179.1B	
D314	8-719-908-03	GP08D	
D315	8-719-988-61	1SS355TE-17	
D318	8-719-988-61	1SS355TE-17	
D319	8-719-988-61	1SS355TE-17	
D320	8-719-988-61	1SS355TE-17	
D321	8-719-988-61	1SS355TE-17	
D322	8-719-069-60	UDZSTE-179.1B	
D323	8-719-069-60	UDZSTE-179.1B	
D324	8-719-069-60	UDZSTE-179.1B	
D325	8-719-069-60	UDZSTE-179.1B	
D326	8-719-988-61	1SS355TE-17	
D327	8-719-988-61	1SS355TE-17	
D400	8-719-988-61	1SS355TE-17	
D401	8-719-988-61	1SS355TE-17	
D403	8-719-069-60	UDZSTE-179.1B	
D404	8-719-069-60	UDZSTE-179.1B	
D406	8-719-069-60	UDZSTE-179.1B	
D407	8-719-069-60	UDZSTE-179.1B	
D408	8-719-069-60	UDZSTE-179.1B	
D500	8-719-911-19	1SS119-25	
D501	8-719-911-19	1SS119-25	
D502	8-719-302-43	EL1Z	
D503	8-719-302-43	EL1Z	
D504	8-719-302-43	EL1Z	
D552	8-719-908-03	GP08D	
D553	8-719-109-89	RD5.6ESB2	
D600	8-719-030-33	DIODE EG01CV1	
D601	8-719-077-77	D3SB60F3	
D602	8-719-510-73	S3L20UF4	
D603	8-719-110-39	RD15ES-B1	
D604	8-719-063-70	D1NL20U	
D605	8-719-063-70	D1NL20U	
D606	8-719-063-70	D1NL20U	
D608	8-719-312-10	RU4AM-T3	
D609	8-719-067-18	RN4Z	
D800	8-719-911-19	1SS119-25	
D802	8-719-908-03	GP08D	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION	REMARK
D803	8-719-908-03	GP08D	
D804	8-719-081-00	DIODE BY228/A52A/	
D805	8-719-069-60	UDZSTE-179.1B	
D851	8-719-979-85	EGP20G	
D853	8-719-988-61	1SS355TE-17	
D854	8-719-158-53	RD13SB2	
D961	8-719-988-61	1SS355TE-17	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
D963	8-719-988-61	1SS355TE-17	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
D964	8-719-988-61	1SS355TE-17	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
		<CONNECTOR>	
DY1	* 1-580-798-11	CONNECTOR PIN (DY) 6P	
		<FUSE>	
F600	1-576-016-11	FUSE, TIME-LAG (BET) 3.15A/250V	
		(KV-PG21P42/PG21P42/G/L/N/	
		PG21N70(PHILIPPINES))	
		<FERRITE BEAD>	
FB001	1-410-397-21	FERRITE 1.1UH	
FB100	1-239-358-21	FILTER, NOISE	
FB602	1-410-397-21	FERRITE 1.1UH	
FB603	1-412-911-31	FERRITE 0UH	
FB800	1-410-397-21	FERRITE 1.1UH	
		<IC>	
IC001	8-752-925-66	IC CXP85224A-081S	
		(KV-PG21P42/PG21P42/G/L/N)	
IC001	8-752-925-68	IC CXP85220A-083S	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
IC002	8-759-371-21	MM1319AFBE	
IC003	8-759-672-78	M24C08-BN6(A)	
IC004	8-742-225-20	IC SBX3081-21	
IC101	8-759-231-53	TA7805S	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
IC203	6-700-036-01	IC AN5279	
IC301	6-700-145-01	IC TDA8843/N2	
IC400	6-700-033-01	IC MM1501XNRE	
IC402	8-759-649-89	IC MC4558CD	
IC551	8-759-835-98	IC AN5522	
IC601	8-749-019-42	IC STR-F6707A	
IC602	8-749-920-61	SE-135N	
IC604	8-759-459-99	PQ09RD11	
IC850	8-759-700-07	NJM2903M	
IC851	8-759-649-89	IC MC4558CD	
		<JACK>	
J200	1-770-785-12	JACK	
J400	1-779-849-11	JACK BLOCK, PIN 4P	
J401	1-779-205-11	JACK, PIN 2P	
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT 0	
JR002	1-216-295-91	SHORT 0	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	

REF NO.	PART NO.	DESCRIPTION	REMARK
JR003	1-216-295-91	SHORT 0	
JR012	1-216-295-91	SHORT 0	
JR013	1-216-295-91	SHORT 0	
JR014	1-216-295-91	SHORT 0	
JR015	1-216-295-91	SHORT 0	
JR018	1-216-295-91	SHORT 0	
JR020	1-216-295-91	SHORT 0	
JR030	1-216-295-91	SHORT 0	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
JR035	1-216-295-91	SHORT 0	
JR036	1-216-295-91	SHORT 0	
JR100	1-216-295-91	SHORT 0	
JR202	1-216-295-91	SHORT 0	
JR212	1-216-295-91	SHORT 0	
JR214	1-216-295-91	SHORT 0	
JR301	1-216-295-91	SHORT 0	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
JR304	1-216-295-91	SHORT 0	
		<COIL>	
L001	1-414-855-31	INDUCTOR 1UH	
L002	1-414-184-41	INDUCTOR 15UH	
L100	1-414-856-11	INDUCTOR 10UH	
L101	1-410-498-11	INDUCTOR 1.2UH	
L102	1-410-985-42	INDUCTOR 0.22UH	
L103	1-410-987-42	INDUCTOR 0.33UH	
L300	1-410-511-11	INDUCTOR 15UH	
		(KV-PG21P42/PG21P42/G/L/N)	
L301	1-410-508-11	INDUCTOR 8.2UH	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
L303	1-410-508-11	INDUCTOR 8.2UH	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
L304	1-410-510-11	INDUCTOR 12UH	
		(KV-PG21P42/PG21P42/G/L/N)	
L305	1-410-510-11	INDUCTOR 12UH	
		(KV-PG21P42/PG21P42/G/L/N)	
L306	1-410-501-11	INDUCTOR 2.2UH	
		(KV-PG21P42/PG21P42/G/L/N)	
L308	1-410-501-11	INDUCTOR 2.2UH	
		(KV-PG21P42/PG21P42/G/L/N)	
L309	1-410-502-11	INDUCTOR 2.7UH	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
L400	1-414-187-11	INDUCTOR 47UH	
L500	1-408-947-00	INDUCTOR 2.2MH	
L600	1-412-533-21	INDUCTOR 47UH	
L800	1-406-677-11	INDUCTOR 10MH	
L802	1-424-796-11	COIL, HORIZONTAL LINEARITY	
L803	1-414-493-41	INDUCTOR 4.7MH	
L921	1-414-191-11	INDUCTOR 150UH	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
L922	1-414-191-11	INDUCTOR 150UH	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
L923	1-414-182-11	INDUCTOR 6.8UH	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
L962	1-410-516-11	INDUCTOR 39UH	
		(KV-PG21N70(PHILIPPINES/TAIWAN))	
		<PHOTO COUPLER>	
PH600	⚠ 8-749-924-35	PC123F2	

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REF NO.	PART NO.	DESCRIPTION	REMARK
		<IC LINK>	
PS600	1-533-597-41	LINK, IC	
PS601	1-533-597-41	LINK, IC (KV-PG21N70(PHILIPPINES/TAIWAN))	
		<TRANSISTOR>	
Q001	8-729-421-19	UN2213	
Q002	8-729-421-19	UN2213	
Q003	8-729-010-25	MSD601-RT1	
Q004	8-729-010-25	MSD601-RT1	
Q005	8-729-010-25	MSD601-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q100	8-729-010-25	MSD601-RT1	
Q102	8-729-022-54	TRANSISTOR 2SC3779C,D-AA	
Q105	8-729-010-25	MSD601-RT1	
Q106	8-729-010-25	MSD601-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q201	8-729-010-25	MSD601-RT1	
Q204	8-729-216-22	2SA1162-G	
Q205	8-729-421-22	UN2211	
Q301	8-729-010-05	MSB709-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q302	8-729-010-05	MSB709-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q303	8-729-010-25	MSD601-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q304	8-729-010-05	MSB709-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q305	8-729-010-05	MSB709-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q306	8-729-010-25	MSD601-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q308	8-729-424-67	UN2216 (KV-PG21P42/PG21P42/G/L/N)	
Q309	8-729-010-25	MSD601-RT1 (KV-PG21P42/PG21P42/G/L/N)	
Q311	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q312	8-729-424-67	UN2216 (KV-PG21P42/PG21P42/G/L/N)	
Q313	8-729-424-67	UN2216 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q315	8-729-010-25	MSD601-RT1	
Q318	8-729-010-25	MSD601-RT1	
Q319	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q320	8-729-421-22	UN2211	
Q321	8-729-424-67	UN2216 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q400	8-729-010-05	MSB709-RT1	
Q401	8-729-424-67	UN2216	
Q402	8-729-424-67	UN2216	
Q403	8-729-010-05	MSB709-RT1	
Q404	8-729-010-05	MSB709-RT1	
Q405	8-729-010-05	MSB709-RT1	
Q406	8-729-010-25	MSD601-RT1	
Q407	8-729-010-25	MSD601-RT1	
Q500	8-729-200-17	2SA1091-O	
Q800	8-729-140-50	2SC3209LK	
Q801	8-729-055-74	TRANSISTOR 2SD2624-CA	
Q802	8-729-050-48	TRANSISTOR IRF614-005	
Q850	8-729-010-25	MSD601-RT1	
Q851	8-729-010-05	MSB709-RT1	
Q922	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q923	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q924	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q956	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q961	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q962	8-729-010-05	MSB709-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q964	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	
Q966	8-729-010-25	MSD601-RT1 (KV-PG21N70(PHILIPPINES/TAIWAN))	

REF NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R001	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R002	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R003	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R004	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R005	1-216-043-91	RES-CHIP	560	5%	1/10W
R006	1-216-043-91	RES-CHIP	560	5%	1/10W
R007	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R008	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R009	1-216-037-00	RES-CHIP	330	5%	1/10W
R010	1-216-037-00	RES-CHIP	330	5%	1/10W
R011	1-216-295-91	SHORT	0		
R012	1-216-049-11	RES-CHIP	1K	5%	1/10W
R013	1-216-041-00	RES-CHIP	470	5%	1/10W
R014	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R015	1-216-025-11	RES-CHIP	100	5%	1/10W
R016	1-216-037-00	RES-CHIP	330	5%	1/10W
R017	1-216-049-11	RES-CHIP	1K	5%	1/10W
R018	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R019	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R020	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R022	1-216-049-11	RES-CHIP	1K	5%	1/10W
R024	1-216-025-11	RES-CHIP	100	5%	1/10W
R025	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R026	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R027	1-216-101-00	RES-CHIP	150K	5%	1/10W
R028	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R029	1-216-025-11	RES-CHIP	100	5%	1/10W
R031	1-216-025-11	RES-CHIP	100	5%	1/10W
R032	1-216-049-11	RES-CHIP	1K	5%	1/10W
R033	1-216-073-91	RES-CHIP	10K	5%	1/10W
R034	1-216-833-11	RES-CHIP (KV-PG21P42/PG21P42/G/L/N/ PG21N70(PHILIPPINES))	10K	5%	1/16W
R035	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R036	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R037	1-216-821-11	RES-CHIP (KV-PG21P42/PG21P42/G/L/N)	1K	5%	1/16W
R038	1-216-821-11	RES-CHIP (KV-PG21P42/PG21P42/G/L/N)	1K	5%	1/16W
R039	1-216-043-91	RES-CHIP	560	5%	1/10W
R042	1-216-039-00	RES-CHIP	390	5%	1/10W
R043	1-216-025-11	RES-CHIP	100	5%	1/10W
R044	1-216-033-00	RES-CHIP	220	5%	1/10W
R045	1-216-073-91	RES-CHIP	10K	5%	1/10W
R046	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R047	1-216-025-11	RES-CHIP	100	5%	1/10W
R048	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R049	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R050	1-208-820-11	METAL CHIP	39K	0.5%	1/10W

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REF NO.	PART NO.	DESCRIPTION			REMARK
R051	1-216-073-91	RES-CHIP	10K	5%	1/10W
R052	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R053	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R054	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R055	1-216-049-11	RES-CHIP	1K	5%	1/10W
R056	1-216-049-11	RES-CHIP	1K	5%	1/10W
R057	1-216-025-11	RES-CHIP	100	5%	1/10W
R058	1-216-025-11	RES-CHIP	100	5%	1/10W
R059	1-216-033-00	RES-CHIP	220	5%	1/10W
R060	1-216-033-00	RES-CHIP	220	5%	1/10W
R061	1-216-033-00	RES-CHIP	220	5%	1/10W
R062	1-216-821-11	RES-CHIP	1K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R063	1-216-821-11	RES-CHIP	1K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R064	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R066	1-216-049-11	RES-CHIP	1K	5%	1/10W
R072	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R073	1-216-837-11	RES-CHIP	22K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R074	1-216-049-11	RES-CHIP	1K	5%	1/10W
R076	1-216-025-11	RES-CHIP	100	5%	1/10W
R077	1-216-025-11	RES-CHIP	100	5%	1/10W
R100	1-216-049-11	RES-CHIP	1K	5%	1/10W
R103	1-211-981-11	METAL CHIP	33	0.5%	1/10W
R106	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R107	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R108	1-216-041-00	RES-CHIP	470	5%	1/10W
R109	1-216-019-00	RES-CHIP	56	5%	1/10W
R115	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R117	1-216-081-00	RES-CHIP	22K	5%	1/10W
R118	1-216-041-00	RES-CHIP	470	5%	1/10W
R119	1-216-081-00	RES-CHIP	22K	5%	1/10W
R120	1-216-824-11	RES-CHIP	1.8K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R121	1-216-837-11	RES-CHIP	22K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R122	1-216-851-11	RES-CHIP	330K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R123	1-216-837-11	RES-CHIP	22K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R124	1-216-081-00	RES-CHIP	22K	5%	1/10W
R125	1-215-925-11	METAL OXIDE	22K	5%	3W
R128	1-216-025-11	RES-CHIP	100	5%	1/10W
R129	1-211-977-11	METAL CHIP	22	0.5%	1/10W
R130	1-216-049-11	RES-CHIP	1K	5%	1/10W
R133	1-249-389-11	CARBON	4.7	5%	1/4W
R134	1-216-864-11	SHORT	0		
		(KV-PG21P42/PG21P42/G/L/N)			
R134	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R135	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R200	1-216-073-91	RES-CHIP	10K	5%	1/10W
R201	1-216-295-91	SHORT	0		
R206	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R209	1-216-073-91	RES-CHIP	10K	5%	1/10W
R211	1-249-409-11	CARBON	220	5%	1/4W
R212	1-216-049-11	RES-CHIP	1K	5%	1/10W
R214	1-216-295-91	SHORT	0		

REF NO.	PART NO.	DESCRIPTION			REMARK
R221	1-216-025-11	RES-CHIP	100	5%	1/10W
R222	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R240	1-216-077-91	RES-CHIP	15K	5%	1/10W
R241	1-216-077-91	RES-CHIP	15K	5%	1/10W
R242	1-216-073-91	RES-CHIP	10K	5%	1/10W
R243	1-216-073-91	RES-CHIP	10K	5%	1/10W
R300	1-216-033-00	RES-CHIP	220	5%	1/10W
R302	1-216-813-11	RES-CHIP	220	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R303	1-216-033-00	RES-CHIP	220	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R304	1-218-849-11	METAL CHIP	1.2K	0.5%	1/10W
		(KV-PG21P42/PG21P42/G/L/N)			
R305	1-216-045-00	RES-CHIP	680	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R306	1-216-816-11	RES-CHIP	390	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R307	1-216-813-11	RES-CHIP	220	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R309	1-216-029-00	RES-CHIP	150	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R310	1-216-816-11	RES-CHIP	390	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R311	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R312	1-216-033-00	RES-CHIP	220	5%	1/10W
R313	1-218-835-11	METAL CHIP	330	0.5%	1/10W
		(KV-PG21P42/PG21P42/G/L/N)			
R314	1-218-835-11	METAL CHIP	330	0.5%	1/10W
		(KV-PG21P42/PG21P42/G/L/N)			
R315	1-216-837-11	RES-CHIP	22K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R316	1-216-031-00	RES-CHIP	180	5%	1/10W
R317	1-216-817-11	RES-CHIP	470	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R320	1-216-837-11	RES-CHIP	22K	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R323	1-216-817-11	RES-CHIP	470	5%	1/16W
		(KV-PG21P42/PG21P42/G/L/N)			
R324	1-216-041-00	RES-CHIP	470	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R325	1-216-081-00	RES-CHIP	22K	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R326	1-216-081-00	RES-CHIP	22K	5%	1/10W
		(KV-PG21N70(PHILIPPINES/TAIWAN))			
R327	1-216-049-11	RES-CHIP	1K	5%	1/10W
R328	1-216-025-11	RES-CHIP	100	5%	1/10W
R329	1-216-043-91	RES-CHIP	560	5%	1/10W
R330	1-216-295-91	SHORT	0		
R331	1-216-295-91	SHORT	0		
R332	1-216-295-91	SHORT	0		
R333	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R334	1-216-025-11	RES-CHIP	100	5%	1/10W
R335	1-216-025-11	RES-CHIP	100	5%	1/10W
R336	1-216-025-11	RES-CHIP	100	5%	1/10W
R337	1-216-073-91	RES-CHIP	10K	5%	1/10W
R338	1-216-077-91	RES-CHIP	15K	5%	1/10W
R339	1-216-035-00	RES-CHIP	270	5%	1/10W
R340	1-162-974-11	CERAMIC CHIP	0.01UF		50V
R342	1-216-295-91	SHORT	0		
R345	1-216-025-11	RES-CHIP	100	5%	1/10W
R348	1-216-025-11	RES-CHIP	100	5%	1/10W
R350	1-216-039-00	RES-CHIP	390	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R352	1-216-073-91	RES-CHIP	10K	5%	1/10W
R353	1-216-119-00	RES-CHIP	820K	5%	1/10W
R354	1-216-119-00	RES-CHIP	820K	5%	1/10W
R355	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R356	1-216-049-11	RES-CHIP	1K	5%	1/10W
R357	1-216-101-00	RES-CHIP	150K	5%	1/10W
R358	1-216-025-11	RES-CHIP	100	5%	1/10W
R360	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R361	1-216-033-00	RES-CHIP	220	5%	1/10W
R362	1-216-083-00	RES-CHIP	27K	5%	1/10W
R363	1-216-295-91	SHORT	0		
R364	1-216-077-91	RES-CHIP	15K	5%	1/10W
R365	1-216-295-91	SHORT	0		
R367	1-216-099-00	RES-CHIP	120K	5%	1/10W
R368	1-216-049-11	RES-CHIP	1K	5%	1/10W
R369	1-216-123-11	RES-CHIP	1.2M	5%	1/10W
R370	1-216-083-00	RES-CHIP	27K	5%	1/10W
R371	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R374	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R376	1-216-295-91	SHORT	0		
R377	1-216-025-11	RES-CHIP (KV-PG21N70(PHILIPPINES/TAIWAN))	100	5%	1/10W
R378	1-216-049-11	RES-CHIP (KV-PG21N70(PHILIPPINES/TAIWAN))	1K	5%	1/10W
R389	1-216-109-00	RES-CHIP	330K	5%	1/10W
R392	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R393	1-216-049-11	RES-CHIP	1K	5%	1/10W
R400	1-216-295-91	SHORT	0		
R401	1-216-049-11	RES-CHIP	1K	5%	1/10W
R409	1-216-113-00	RES-CHIP	470K	5%	1/10W
R410	1-216-025-11	RES-CHIP	100	5%	1/10W
R411	1-216-049-11	RES-CHIP	1K	5%	1/10W
R412	1-216-049-11	RES-CHIP	1K	5%	1/10W
R413	1-216-113-00	RES-CHIP	470K	5%	1/10W
R414	1-216-049-11	RES-CHIP	1K	5%	1/10W
R415	1-216-073-91	RES-CHIP	10K	5%	1/10W
R416	1-216-073-91	RES-CHIP	10K	5%	1/10W
R417	1-216-021-00	RES-CHIP	68	5%	1/10W
R418	1-216-025-11	RES-CHIP	100	5%	1/10W
R420	1-216-049-11	RES-CHIP	1K	5%	1/10W
R421	1-216-049-11	RES-CHIP	1K	5%	1/10W
R423	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R424	1-216-091-00	RES-CHIP	56K	5%	1/10W
R425	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R426	1-216-049-11	RES-CHIP	1K	5%	1/10W
R427	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R428	1-216-041-00	RES-CHIP	470	5%	1/10W
R429	1-216-073-91	RES-CHIP	10K	5%	1/10W
R430	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R432	1-216-121-11	RES-CHIP	1M	5%	1/10W
R433	1-216-091-00	RES-CHIP	56K	5%	1/10W
R434	1-216-049-11	RES-CHIP	1K	5%	1/10W
R436	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R438	1-216-049-11	RES-CHIP	1K	5%	1/10W
R440	1-216-121-11	RES-CHIP	1M	5%	1/10W
R445	1-216-089-91	RES-CHIP	47K	5%	1/10W
R447	1-216-025-11	RES-CHIP	100	5%	1/10W
R500	1-260-126-81	CARBON	180K	5%	1/2W
R501	1-249-419-11	CARBON	1.5K	5%	1/4W
R502	1-216-370-11	METAL OXIDE	1.2	5%	2W
R503	1-216-091-00	RES-CHIP	56K	5%	1/10W
R504	1-216-091-00	RES-CHIP	56K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R505	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R506	1-260-125-11	CARBON	150K	5%	1/2W
R507	1-260-288-11	CARBON	0.47	5%	1/2W
R508	1-260-288-11	CARBON	0.47	5%	1/2W
R509	1-260-288-11	CARBON	0.47	5%	1/2W
R510	1-260-127-11	CARBON	220K	5%	1/2W
R511	1-215-449-00	METAL	15K	1%	1/4W
R512	1-215-453-00	METAL	22K	1%	1/4W
R513	1-215-445-00	METAL	10K	1%	1/4W
R514	1-249-421-11	CARBON	2.2K	5%	1/4W
R553	1-249-385-11	CARBON	2.2	5%	1/4W
R554	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R557	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R558	1-216-081-00	RES-CHIP	22K	5%	1/10W
R559	1-216-089-91	RES-CHIP	47K	5%	1/10W
R563	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R564	1-215-865-11	METAL OXIDE	220	5%	1W
R565	1-216-350-11	METAL OXIDE	1.2	5%	1W
R567	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R568	1-215-461-00	METAL	47K	1%	1/4W
R600	1-215-915-11	METAL OXIDE	470	5%	3W
R602	1-205-998-11	CEMENTED (KV-PG21P42/PG21P42/G/L/N)	1	5%	10W
R602	1-240-262-11	CEMENTED (KV-PG21N70(PHILIPPINES/TAIWAN))	0.68	5%	10W
R603	1-205-998-11	CEMENTED (KV-PG21P42/PG21P42/G/L/N)	1	5%	10W
R603	1-240-262-11	CEMENTED (KV-PG21N70(PHILIPPINES/TAIWAN))	0.68	5%	10W
R605	1-217-191-21	METAL	0.18	10%	2W
R606	1-216-045-00	RES-CHIP	680	5%	1/10W
R608	1-260-127-11	CARBON	220K	5%	1/2W
R609	1-216-091-00	RES-CHIP	56K	5%	1/10W
R610	1-215-926-00	METAL OXIDE	33K	5%	3W
R611	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R612	1-249-420-11	CARBON	1.8K	5%	1/4W
R614	1-216-397-11	METAL OXIDE	4.7	5%	3W
R615	1-215-877-11	METAL OXIDE	22K	5%	1W
R617	1-216-049-11	RES-CHIP	1K	5%	1/10W
R619	⚠ 1-240-917-81	METAL	8.2M	5%	1W
R620	1-249-389-11	CARBON	4.7	5%	1/4W
R623	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R624	1-260-126-81	CARBON	180K	5%	1/2W
R627	1-205-998-11	CEMENTED (KV-PG21P42/PG21P42/G/L/N)	1	5%	10W
R627	1-240-262-11	CEMENTED (KV-PG21N70(PHILIPPINES/TAIWAN))	0.68	5%	10W
R628	1-216-295-91	SHORT	0		
R800	1-216-049-11	RES-CHIP	1K	5%	1/10W
R801	1-216-081-00	RES-CHIP	22K	5%	1/10W
R802	1-215-917-11	METAL OXIDE	1K	5%	3W
R803	1-260-332-51	CARBON	2.2K	5%	1/2W
R806	1-216-295-91	SHORT	0		
R808	1-249-421-11	CARBON	2.2K	5%	1/4W
R810	1-215-886-11	METAL OXIDE	100	5%	2W
R811	1-215-911-11	METAL OXIDE	100	5%	3W
R812	1-215-917-11	METAL OXIDE	1K	5%	3W
R813	1-216-049-11	RES-CHIP	1K	5%	1/10W
R814	1-215-917-11	METAL OXIDE	1K	5%	3W
R860	1-216-103-00	RES-CHIP	180K	5%	1/10W
R861	1-216-295-91	SHORT	0		
R862	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R863	1-216-073-91	RES-CHIP	10K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
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REF NO.	PART NO.	DESCRIPTION	REMARK
R864	1-208-794-11	METAL CHIP 3.3K 0.5% 1/10W	
R865	1-216-073-91	RES-CHIP 10K 5% 1/10W	
R866	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R867	1-208-812-11	METAL CHIP 18K 0.5% 1/10W	
R868	1-249-393-11	CARBON 10 5% 1/4W	
R869	1-249-381-11	CARBON 1 5% 1/4W	
R870	1-218-760-11	METAL CHIP 220K 0.5% 1/10W	
R874	1-215-475-00	METAL 180K 1% 1/4W	
R878	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R879	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R880	1-216-097-11	RES-CHIP 100K 5% 1/10W	
R881	1-216-085-91	RES-CHIP 33K 5% 1/10W	
R882	1-216-073-91	RES-CHIP 10K 5% 1/10W	
R883	1-216-067-00	RES-CHIP 5.6K 5% 1/10W	
R884	1-216-089-91	RES-CHIP 47K 5% 1/10W	
R885	1-216-073-91	RES-CHIP 10K 5% 1/10W	
R886	1-216-295-91	SHORT 0	
R887	1-215-477-00	METAL 220K 1% 1/4W	
R888	1-215-477-00	METAL 220K 1% 1/4W	
R889	1-208-830-11	METAL CHIP 100K 0.5% 1/10W	
R921	1-216-045-00	RES-CHIP 680 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R922	1-216-045-00	RES-CHIP 680 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R923	1-216-029-00	RES-CHIP 150 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R924	1-216-029-00	RES-CHIP 150 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R925	1-216-039-00	RES-CHIP 390 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R926	1-216-041-00	RES-CHIP 470 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R927	1-216-061-91	RES-CHIP 3.3K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R928	1-216-073-91	RES-CHIP 10K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R929	1-216-025-11	RES-CHIP 100 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R930	1-216-049-11	RES-CHIP 1K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R931	1-216-025-11	RES-CHIP 100 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R932	1-216-065-91	RES-CHIP 4.7K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R936	1-216-061-91	RES-CHIP 3.3K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R962	1-216-033-00	RES-CHIP 220 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R966	1-216-051-00	RES-CHIP 1.2K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R968	1-216-057-00	RES-CHIP 2.2K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R970	1-216-085-91	RES-CHIP 33K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R977	1-216-091-00	RES-CHIP 56K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R978	1-216-075-00	RES-CHIP 12K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R980	1-216-051-00	RES-CHIP 1.2K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R981	1-216-041-00	RES-CHIP 470 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R983	1-216-295-91	SHORT 0 (KV-PG21N70(PHILIPPINES/TAIWAN))	
R984	1-216-025-11	RES-CHIP 100 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R986	1-216-085-91	RES-CHIP 33K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R987	1-216-071-00	RES-CHIP 8.2K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R988	1-216-051-00	RES-CHIP 1.2K 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R989	1-216-041-00	RES-CHIP 470 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
R991	1-216-041-00	RES-CHIP 470 5% 1/10W (KV-PG21N70(PHILIPPINES/TAIWAN))	
		<VARIABLE RESISTOR>	
RV300	1-241-769-11	RES, ADJ, CARBON 470K	
		<SWITCH>	
S001	1-692-431-21	SWITCH, TACTILE	
S002	1-692-431-21	SWITCH, TACTILE	
S003	1-692-431-21	SWITCH, TACTILE	
S004	1-692-431-21	SWITCH, TACTILE	
S005	1-692-431-21	SWITCH, TACTILE	
S006	1-692-431-21	SWITCH, TACTILE	
S600	⚠ 1-571-433-31	SWITCH, PUSH (AC POWER)	
S800	1-572-707-11	SWITCH, LEVER	
		<#########>	
SWF100	1-577-169-12	SAWF (KV-PG21P42/PG21P42/G/L/N)	
SWF100	1-781-281-11	FILTER, SURFACE WAVE (KV-PG21N70(PHILIPPINES/TAIWAN))	
		<TRANSFORMER>	
T503	⚠ 1-453-329-21	TRANSFORMER ASSY FLYBACK (NX-4751//M3A4)	
T600	⚠ 1-424-682-11	COIL, LINE FILTER (KV-PG21P42/PG21P42/G/L/N)	
T600	⚠ 1-419-817-11	TRANSFORMER, LINE FILTER (KV-PG21N70(PHILIPPINES/TAIWAN)	
T601	⚠ 1-437-333-21	TRANSFORMER, CONVERTER (SRT)	
T800	1-435-374-11	TRANSFORMER, FERRITE (HDT)	
		<THERMISTOR>	
THP600	1-801-061-11	THERMISTOR, POSITIVE	
THP600	1-803-744-11	THERMISTOR, POSITIVE	
		<TUNER>	
TU100	8-598-591-00	TUNER, VSS BT-AG402 (KV-PG21P42/PG21P42/G/L/N)	
TU100	8-598-590-00	TUNER, FSS BTP-AA401 (KV-PG21N70(PHILIPPINES/TAIWAN))	
		<VARISTOR>	
VDR600	1-803-830-11	VARISTOR (ERZV14D621) (KV-PG21P42/PG21P42/G/L/N)	
VDR600	1-801-451-51	VARISTOR TNR14V271K660 (KV-PG21N70(PHILIPPINES/TAIWAN))	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

CV A

REF NO.	PART NO.	DESCRIPTION	REMARK
		<CRYSTAL>	
X001	1-577-358-21	VIBRATOR, CERAMIC	
X300	1-567-505-11	OSCILLATOR, CRYSTAL	
X301	1-567-504-11	OSCILLATOR, CRYSTAL	
**********			
*	A-1332-245-A	CV BOARD MOUNTED (KV-PG21P42/PG21P42/G/L/N)	
*	A-1332-257-A	CV BOARD MOUNTED (KV-PG21N70 (TAIWAN/PHILIPPINES))	
		**********	
	4-382-854-01	SCREW (M3X8), P, SW (+)	
		<CAPACITOR>	
C701	1-115-350-51	CERAMIC 0.0047UF 2KV	
C702	1-102-074-00	CERAMIC 0.001UF 10.00% 50V	
C703	1-107-651-11	ELECT 4.7UF 20.00% 250V	
C704	1-130-202-00	FILM 0.022UF 5.00% 400V	
C706	1-126-947-11	ELECT 47UF 20.00% 16V	
C708	1-102-114-00	CERAMIC 470PF 10.00% 50V	
C709	1-102-114-00	CERAMIC 470PF 10.00% 50V	
C710	1-102-114-00	CERAMIC 470PF 10.00% 50V	
C712	1-102-115-00	CERAMIC 560PF 10.00% 50V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C712	1-102-114-00	CERAMIC 470PF 10.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C713	1-102-116-00	CERAMIC 680PF 10.00% 50V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C713	1-102-115-00	CERAMIC 560PF 10.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C714	1-102-116-00	CERAMIC 680PF 10.00% 50V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C714	1-102-115-00	CERAMIC 560PF 10.00% 50V (KV-PG21P42/PG21P42/G/L/N)	
C716	1-126-933-11	ELECT 100UF 20.00% 16V	
C717	1-102-852-91	CERAMIC 47PF 5.00% 50V	
C718	1-126-933-11	ELECT 100UF 20.00% 16V	
C719	1-102-116-00	CERAMIC 680PF 10.00% 50V	
C1760	1-126-933-11	ELECT 100UF 20.00% 16V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1761	1-161-830-00	CERAMIC 0.0047UF 500V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1763	1-107-638-11	ELECT 33UF 20.00% 160V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1764	1-126-935-11	ELECT 470UF 20.00% 10V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1768	1-107-368-11	MYLAR 0.047UF 10.00% 200V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1769	1-107-949-11	ELECT 2.2UF 20.00% 160V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1770	1-107-370-11	MYLAR 0.1UF 10.00% 200V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1773	1-107-368-11	MYLAR 0.047UF 10.00% 200V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1775	1-126-935-11	ELECT 470UF 20.00% 10V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1778	1-130-471-00	MYLAR 0.001UF 5.00% 50V (KV-PG21N70(TAIWAN/ PHILIPPINES))	
C1779	1-130-471-00	MYLAR 0.001UF 5.00% 50V (KV-PG21N70(TAIWAN/ PHILIPPINES))	

REF NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>	
CN701	* 1-564-508-11	PLUG, CONNECTOR 5P	
CN702	1-695-915-11	TAB (CONTACT)	
CN703	* 1-564-511-11	PLUG, CONNECTOR 8P	
CN704	1-695-915-11	TAB (CONTACT)	
CN1701	* 1-564-506-11	PLUG, CONNECTOR 3P (KV-PG21N70(TAIWAN/ PHILIPPINES))	
CN1702	* 1-564-506-11	PLUG, CONNECTOR 3P (KV-PG21N70(TAIWAN/ PHILIPPINES))	
		<DIODE>	
D701	8-719-911-19	1SS119-25	
D702	8-719-911-19	1SS119-25	
D703	8-719-911-19	1SS119-25	
D707	8-719-911-19	1SS119-25	
D708	8-719-911-19	1SS119-25	
D709	8-719-911-19	1SS119-25	
D713	8-719-911-19	1SS119-25	
D714	8-719-911-19	1SS119-25	
D715	8-719-911-19	1SS119-25	
D716	8-719-911-19	1SS119-25	
D717	8-719-070-16	NNCD9.1A-T1	
D1767	8-719-110-88	RD39ES-B2 (KV-PG21N70(TAIWAN/ PHILIPPINES))	
D1768	8-719-110-88	RD39ES-B2 (KV-PG21N70(TAIWAN/ PHILIPPINES))	
		<JACK>	
J701	⚠ 1-540-071-22	SOCKET, CRT	
		<COIL>	
L701	1-414-185-41	INDUCTOR 22UH	
L710	1-414-186-31	INDUCTOR 33UH (KV-PG21N70(TAIWAN/ PHILIPPINES))	
L711	1-414-185-41	INDUCTOR 22UH (KV-PG21N70(TAIWAN/ PHILIPPINES))	
L712	1-414-185-41	INDUCTOR 22UH (KV-PG21N70(TAIWAN/ PHILIPPINES))	
L1700	1-414-187-11	INDUCTOR 47UH (KV-PG21N70(TAIWAN/ PHILIPPINES))	
L1761	1-414-187-11	INDUCTOR 47UH (KV-PG21N70(TAIWAN/ PHILIPPINES))	
		<TRANSISTOR>	
Q704	8-729-326-11	2SC2611	
Q705	8-729-326-11	2SC2611	
Q706	8-729-326-11	2SC2611	
Q707	8-729-200-17	2SA1091-O	
Q708	8-729-200-17	2SA1091-O	
Q709	8-729-200-17	2SA1091-O	
Q710	8-729-119-78	2SC2785-HFE	
Q711	8-729-119-78	2SC2785-HFE	
Q712	8-729-119-78	2SC2785-HFE	
Q1763	8-729-017-05	2SA1837 (KV-PG21N70(TAIWAN/ PHILIPPINES))	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

CV F

REF NO.	PART NO.	DESCRIPTION			REMARK
Q1765	8-729-017-06	2SC4793			
Q1767	8-729-142-86	2SC3733 (KV-PG21N70(TAIWAN/ PHILIPPINES))			
Q1777	8-729-326-11	2SC2611 (KV-PG21N70(TAIWAN/ PHILIPPINES))			
		<RESISTOR>			
R703	1-219-752-11	CARBON	100K	5%	1/2W
R706	1-215-417-00	METAL	680	1%	1/4W
R707	1-215-413-00	METAL	470	1%	1/4W
R708	1-216-387-11	METAL OXIDE	0.68	5%	3W
R710	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R711	1-260-330-11	CARBON	1.5K	5%	1/2W
R712	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R713	1-260-330-11	CARBON	1.5K	5%	1/2W
R714	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R715	1-260-330-11	CARBON	1.5K	5%	1/2W
R716	1-249-923-11	CARBON	1K	5%	1/4W
R717	1-249-923-11	CARBON	1K	5%	1/4W
R718	1-249-923-11	CARBON	1K	5%	1/4W
R725	1-249-421-11	CARBON	2.2K	5%	1/4W
R726	1-249-421-11	CARBON	2.2K	5%	1/4W
R727	1-249-421-11	CARBON	2.2K	5%	1/4W
R728	1-249-408-11	CARBON	180	5%	1/4W
R729	1-249-408-11	CARBON	180	5%	1/4W
R730	1-249-408-11	CARBON	180	5%	1/4W
R731	1-249-407-11	CARBON	150	5%	1/4W
R732	1-249-407-11	CARBON	150	5%	1/4W
R733	1-249-407-11	CARBON	150	5%	1/4W
R734	1-219-743-11	CARBON	100	5%	1/2W
R738	1-247-807-31	CARBON	100	5%	1/4W
R739	1-247-807-31	CARBON	100	5%	1/4W
R740	1-247-807-31	CARBON	100	5%	1/4W
R755	1-249-418-11	CARBON	1.2K	5%	1/4W
R756	1-249-418-11	CARBON	1.2K	5%	1/4W
R757	1-249-418-11	CARBON	1.2K	5%	1/4W
R1763	1-247-807-31	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	100	5%	1/4W
R1764	1-260-312-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	47	5%	1/2W
R1765	1-249-414-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	560	5%	1/4W
R1769	1-249-385-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	2.2	5%	1/4W
R1772	1-249-432-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	18K	5%	1/4W
R1774	1-215-913-11	METAL OXIDE (KV-PG21N70(TAIWAN/ PHILIPPINES))	220	5%	3W
R1775	1-249-417-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	1K	5%	1/4W
R1776	1-249-432-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	18K	5%	1/4W
R1779	1-249-414-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	560	5%	1/4W
R1782	1-249-385-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	2.2	5%	1/4W
R1785	1-249-400-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	39	5%	1/4W
R1790	1-215-887-00	METAL OXIDE (KV-PG21N70(TAIWAN/ PHILIPPINES))	150	5%	2W
R1812	1-249-425-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	4.7K	5%	1/4W
R1851	1-249-393-11	CARBON (KV-PG21N70(TAIWAN/ PHILIPPINES))	10	5%	1/4W

REF NO.	PART NO.	DESCRIPTION			REMARK
		<VARIABLE RESISTOR>			
RV702	1-241-656-11	RES, ADJ, METAL FILM 110M			
		**********			
	* A-1400-175-A	F BOARD MOUNTED (KV-PG21N70(TAIWAN ONLY)) **********			
	1-533-223-11	CLIP, FUSE			
	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE			
		<CAPACITOR>			
C4601	⚠ 1-115-165-11	FILM	0.1UF	20.00%	275V
C4602	⚠ 1-117-703-51	CERAMIC	0.0047UF	99%	250V
		<CONNECTOR>			
CN4601	1-580-843-11	PIN, CONNECTOR (POWER)			
CN4602	1-580-843-11	PIN, CONNECTOR (POWER)			
CN4603	1-695-915-11	TAB (CONTACT)			
		<FUSE>			
F4601	⚠ 1-576-016-11	FUSE, CYLINDRICAL (TIME-LAG)	3.15A/250V		
		<RESISTOR>			
R4601	⚠ 1-202-885-91	SOLID	1M	10%	1/2W
		<TRANSFORMER>			
T4601	⚠ 1-435-214-11	TRANSFORMER, LINE FILTER			
T4602	⚠ 1-435-214-11	TRANSFORMER, LINE FILTER			
		<VARISTOR>			
VDR461	1-801-451-51	VARISTOR TNR14V271K660			
		**********			
		ACCESSORIES AND PACKING MATERIALS **********			
	1-501-372-81	ANTENNA, TELESCOPIC (KV-PG21P42/PG21P42/G/L/N/ PG21N70(PHILIPPINES))			
	1-417-151-22	MATCHING TRANSFORMER, ANTENNA (KV-PG21P42/PG21P42/G/L/N)			
	1-417-182-11	MATCHING TRANSFORMER, ANTENNA (KV-PG21N70(PHILIPPINES/TAIWAN))			
	* 4-395-957-01	BAG, PROTECTION (KV-PG21N70(PHILIPPINES/TAIWAN))			
	* 4-037-760-01	BAG, PROTECTION (KV-PG21P42/PG21P42/G/L/N)			
	* 4-085-442-01	CUSHION, UPPER (KV-PG21P42/PG21P42/G/L/N)			

REF NO.	PART NO.	DESCRIPTION	REMARK
*	4-085-443-01	CUSHION, LOWER (KV-PG21P42/PG21P42/G/L/N)	
*	4-085-613-01	INDIVIDUAL CARTON (KV-PG21N70(PHILIPPINES/TAIWAN))	
*	4-085-444-01	INDIVIDUAL CARTON (KV-PG21P42/PG21P42/G/L/N)	
	4-085-612-11	MANUAL, INSTRUCTION (KV-PG21N70(PHILIPPINES))	
	4-086-174-11	MANUAL, INSTRUCTION (KV-PG21N70(TAIWAN))	
	4-085-446-11	MANUAL, INSTRUCTION (KV-PG21P42/PG21P42/G/L/N)	
	4-392-003-11	BAND, HOLD (KV-PG21N70(PHILIPPINES/TAIWAN))	
	4-392-003-21	BAND, HOLDING (KV-PG21P42/PG21P42/G/L/N)	
	4 392-004-11	CLIP (KV-PG21N70(PHILIPPINES/TAIWAN))	
	4-059-705-01	CLIP (KV-PG21P42/PG21P42/G/L/N)	

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REF NO.	PART NO.	DESCRIPTION	REMARK
		REMOTE COMMANDER **********	
	1-418-163-51	REMOTE COMMANDER (RM-952) (KV-PG21P42/PG21P42/N)	
	1-418-861-32	REMOTE COMMANDER (RM-952) (KV-PG21P42/G)	
	1-418-861-12	REMOTE COMMANDER (RM-952) (KV-PG21P42/L)	
	1-418-417-21	REMOTE COMMANDER (RM-915) (KV-PG21N70)	
	4-084-290-01	BATTERY COVER REMOTE COMMANDER (KV-PG21P42/PG21P42/N)	
	4-075-331-11	BATTERY COVER REMOTE COMMANDER (KV-PG21P42/L)	
	4-075-331-11	BATTERY COVER REMOTE COMMANDER (KV-PG21P42/G)	

Sony Corporation
Sony Technology Malaysia Sdn. Bhd.
Visual Products General Area

9-872-272-01

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